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The Code of Federal Regulations is sold by the Superintendent of Documents.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0100; Project Identifier MCAI-2021-01128-R; Amendment 39-22018; AD 2022-08-15]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters Deutschland GmbH (AHD) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Helicopters Deutschland GmbH (AHD) Model MBB-BK 117 C-2 helicopters. This AD was prompted by a report of restricted collective lever movement caused by entanglement of the emergency flashlight strap with the cargo hook emergency release lever, causing the emergency flashlight to leave its seat. This AD requires replacing each affected emergency flashlight with a serviceable part, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective May 26, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 26, 2022.

ADDRESSES: For EASA material incorporated by reference (IBR) in this final rule, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find the EASA material on the EASA website at <https://ad.easa.europa.eu>. For Airbus Helicopters service information

identified in this final rule, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0100.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0100; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the EASA AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT:

Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0231, dated October 15, 2021 (EASA AD 2021-0231), to correct an unsafe condition for all serial-numbered Airbus Helicopters Deutschland GmbH (AHD) Model MBB-BK 117 C-2 helicopters.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Airbus Helicopters Deutschland GmbH (AHD) Model MBB-BK 117 C-2 helicopters, certificated in any category. The NPRM published in the **Federal Register** on February 15, 2022 (87 FR 8439). The NPRM was

prompted by a report of restricted collective lever movement caused by entanglement of the emergency flashlight strap with the cargo hook emergency release lever, causing the emergency flashlight to leave its seat. The NPRM proposed to require replacing each affected emergency flashlight with a serviceable part, as specified in EASA AD 2021-0231.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information Under 14 CFR Part 51

EASA AD 2021-0231 requires replacing each affected emergency flashlight with a serviceable part. EASA AD 2021-0231 also specifies that an affected part can be modified and re-identified into a serviceable part. EASA AD 2021-0231 also prohibits the installation of an affected part.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Other Related Service Information

The FAA also reviewed Airbus Helicopters Alert Service Bulletin ASB MBB-BK117 C-2-25A-021, Revision 0, dated August 25, 2021. This service information specifies procedures for removing the strap from the emergency flashlight and then writing a new part number on the emergency flashlight.

Differences Between This AD and the EASA AD

EASA AD 2021–0231 requires compliance within 12 months after the effective date of the EASA AD, whereas this AD requires compliance within 3 months after the effective date of this AD.

Costs of Compliance

The FAA estimates that this AD affects 117 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Replacing an emergency flashlight takes about 1 work-hour and parts cost about \$219 for an estimated cost of \$304 per flashlight and up to \$35,568 for the U.S. fleet. Alternatively, modifying an emergency flashlight takes about 1 work-hour for an estimated cost of \$85 per flashlight.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities

under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–08–15 Airbus Helicopters

Deutschland GmbH (AHD): Amendment 39–22018; Docket No. FAA–2022–0100; Project Identifier MCAI–2021–01128–R.

(a) Effective Date

This airworthiness directive (AD) is effective May 26, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Helicopters Deutschland GmbH (AHD) Model MBB–BK 117 C–2 helicopters, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 2510, Flight Compartment Equipment.

(e) Unsafe Condition

This AD was prompted by a report of restricted collective lever movement. Subsequent inspection determined that the emergency flashlight was stuck under that lever caused by entanglement of the emergency flashlight strap with the cargo hook emergency release lever, causing the emergency flashlight to leave its seat. The FAA is issuing this AD to address entanglement of the emergency flashlight strap with the cargo hook emergency release lever. The unsafe condition, if not addressed, could result in reduced control of the helicopter, possibly resulting in damage to the helicopter and injury to occupants.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation

Safety Agency (EASA) AD 2021–0231, dated October 15, 2021 (EASA AD 2021–0231).

(h) Exceptions to EASA AD 2021–0231

(1) Where EASA AD 2021–0231 refers to its effective date, this AD requires using the effective date of this AD.

(2) This AD does not mandate compliance with the "Remarks" section of EASA AD 2021–0231.

(3) Where paragraph (1) of EASA AD 2021–0231 requires replacing each affected part with a serviceable part within 12 months, this AD requires compliance within 3 months after the effective date of this AD.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2021–0231 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228–7330; email andrea.jimenez@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021–0231, dated October 15, 2021.

(ii) [Reserved]

(3) For EASA AD 2021–0231, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find the EASA material on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy.,

Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. This material may be found in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0100.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 7, 2022.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022-08487 Filed 4-20-22; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1022; Project Identifier AD-2020-01101-T; Amendment 39-21995; AD 2022-07-07]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 757-200, -200CB, and -300 series airplanes. This AD was prompted by a report indicating the passenger service units (PSUs) and life vest panels became separated from their attachments during several survivable accident sequences. This AD requires installing lanyard assemblies on the PSUs, and, for certain airplanes, on the life vest panels and video panels as applicable. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective May 26, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 26, 2022.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA,

Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1022.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1022; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT:

Tony Koung, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3985; email: tony.koung@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 757-200, -200CB, and -300 series airplanes. The NPRM published in the **Federal Register** on December 30, 2020 (85 FR 86515). The NPRM was prompted by a report indicating that the PSUs and life vest panels became separated from their attachments during several survivable accident sequences. In the NPRM, the FAA proposed to require installing lanyard assemblies on the PSUs, and, for certain airplanes, on the life vest panels and video panels as applicable. The FAA is issuing this AD to address the PSUs, life vest panels, and video panels becoming detached and falling into the cabin, which could lead to passenger injuries and impede egress during an evacuation.

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 757-200, -200CB, and -300 series airplanes. The SNPRM published in the **Federal Register** on November 17, 2021 (86 FR 64089). The SNPRM was prompted by a report indicating that the PSUs and life vest panels became separated from their

attachments during several survivable accident sequences and a determination that additional airplanes are also subject to the identified unsafe condition. The SNPRM proposed to require installing lanyard assemblies on the PSUs, and, for certain airplanes, on the life vest panels and video panels as applicable and to expand the applicability to include those additional airplanes. The FAA is issuing this AD to address the PSUs, life vest panels, and video panels becoming detached and falling into the cabin, which could lead to passenger injuries and impede egress during an evacuation.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from the Air Line Pilots Association, International (ALPA), and United Airlines who supported the SNPRM without change.

The FAA received additional comments from Aviation Partners Boeing and Boeing. The following presents the comments received on the SNPRM and the FAA's response to each comment.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per Supplemental Type Certificate (STC) ST01518SE does not affect the accomplishment of the manufacturer's service instructions.

The FAA agrees with the commenter that STC ST01518SE does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST01518SE does not affect the ability to accomplish the actions required by this AD. The FAA has not changed this AD in this regard.

Request To Change Certain Language

Boeing asked that the FAA replace the word "would" with "could potentially" in the FAA clarification "a PSU panel that detached and fell below BWL 265.7 would cause injury to passengers" as specified in the Clarification for PSU Installation section of the SNPRM. Boeing stated that the passenger seat located below an attached PSU panel could be unoccupied or could be occupied by a person short in stature, and in those cases the PSU panel would not strike and cause injury to a passenger.

The FAA acknowledges and agrees with the commenter's request, because the proposed language provides clarity. However, the comment section in the SNPRM is not carried over into this

final rule. Therefore, the FAA has not changed this AD in this regard.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the SNPRM. None of the changes will

increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021. This service information specifies procedures for installing lanyard assemblies on the PSUs, life vest panels, and video panels, as

applicable. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 367 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Install Lanyard Assemblies	Up to 75 work-hours × \$85 per hour = Up to \$6,375.	Up to \$45,750	Up to \$52,125	Up to \$19,129,875.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–07–07 The Boeing Company:
Amendment 39–21995; Docket No. FAA–2020–1022; Project Identifier AD–2020–01101–T.

(a) Effective Date

This airworthiness directive (AD) is effective May 26, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 757–200, –200CB, and –300 series airplanes, certificated in any category, as identified in Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

(e) Unsafe Condition

This AD was prompted by a report indicating the passenger service units (PSUs) and life vest panels became separated from

their attachments during several survivable accident sequences. The FAA is issuing this AD to address the PSUs, life vest panels, and video panels becoming detached and falling into the cabin, which could lead to passenger injuries and impede egress during an evacuation.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the "Compliance" paragraph of Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Special Attention Service Bulletin 757–25–0315, Revision 2, dated March 17, 2021, which is referred to in Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021, uses the phrase "the Revision 2 date of Requirements Bulletin 757–25–0315 RB," this AD requires using "the effective date of this AD."

(2) The lanyard installation specified in paragraph (g) of this AD is not required on Model 757–200 airplanes modified per VT Mobile Aerospace Engineering (VT MAE) supplemental type certificates (STCs) ST03952AT and ST04242AT.

(i) Credit for Previous Actions

For airplanes identified in Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 1, dated May 20, 2020: This paragraph provides credit for the actions

specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 1, dated May 20, 2020.

(j) Parts Installation Limitation

As of the applicable time specified in paragraph (j)(1) or (2) of this AD, no person may install on any airplane any PSU, life vest panel, or video panel without an updated lanyard assembly installed.

(1) For airplanes that have PSUs, life vest panels, or video panels without the updated lanyard assemblies installed as of the effective date of this AD: After modification of the airplane as required by paragraph (g) of this AD.

(2) For airplanes that do not have PSUs, life vest panels, or video panels without the updated lanyard assemblies installed as of the effective date of this AD: As of the effective date of this AD.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(l) Related Information

For more information about this AD, contact Tony Koung, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3985; email: tony.koung@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Requirements Bulletin 757–25–0315 RB, Revision 2, dated March 17, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; phone: 562–797–1717; internet: <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 17, 2022.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–08493 Filed 4–20–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0091; Project Identifier MCAI–2021–01123–T; Amendment 39–22011; AD 2022–08–08]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Airbus SAS Model A318 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes; Model A320–211, –212, –214, –216, –231, –232, and –233 airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes. This AD was prompted by reports that, during inspections accomplished as specified in certain airworthiness limitation items (ALIs), cracks were detected in the double joggle areas at frame (FR) 16 and FR20 in the nose forward fuselage. This AD requires repetitive special detailed inspections of certain areas and applicable on-condition actions, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective May 26, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 26, 2022.

ADDRESSES: For EASA material incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find this IBR material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195. It is also available in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA–2022–0091.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA–2022–0091; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT:

Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, FAA, International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; phone 206–231–3229; email vladimir.ulyanov@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021–0227, dated October 11, 2021 (EASA AD 2021–0227) (also referred to as the MCAI), to correct an unsafe condition for certain Airbus SAS Model A318 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes; Model A320–211, –212, –214, –216, –231, –232, and –233 airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR

part 39 by adding an AD that would apply to certain Airbus SAS Model A318 series airplanes; Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes; Model A320–211, –212, –214, –216, –231, –232, and –233 airplanes; and Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes. The NPRM published in the **Federal Register** on February 8, 2022 (87 FR 7062). The NPRM was prompted by reports that during inspections accomplished in accordance with certain ALIs, cracks were detected in double joggle areas at FR16 and FR20, right hand and left hand sides. The NPRM proposed to require repetitive special detailed inspections of certain areas and applicable on-condition actions, as specified in EASA AD 2021–0227. The NPRM also proposed an optional modification of the double joggle area, which terminates the repetitive inspections.

The FAA is issuing this AD to address cracks in the double joggle areas at FR16 and FR20 in the nose forward fuselage, which, if not detected and corrected,

could reduce the structural integrity of the fuselage. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from the Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information Under 1 CFR Part 51

EASA AD 2021–0227 specifies procedures for repetitive special detailed inspections (rototest inspections) of double joggle areas at FR16 and FR20, right hand and left hand sides for cracking, applicable on-condition actions (repair) and an optional modification of the double joggle area, which terminates the repetitive inspections. The modification includes a rotating probe inspection of certain fastener holes for cracks, a check of the fastener holes for a minimum diameter, and applicable on-condition actions (repair and oversizing holes). This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD would affect 1,549 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 55 work-hours × \$85 per hour = \$4,675	\$0	Up to \$4,675	Up to \$7,241,575.

ESTIMATED COSTS FOR OPTIONAL ACTIONS

Labor cost	Parts cost	Cost per product
60 work-hours × \$85 per hour = \$5,100	\$1,624	\$6,724

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce.

This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities

under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022–08–08 Airbus SAS: Amendment 39–22011; Docket No. FAA–2022–0091; Project Identifier MCAI–2021–01123–T.

(a) Effective Date

This airworthiness directive (AD) is effective May 26, 2022.

(b) Affected ADs

This AD affects AD 2020–20–05, Amendment 39–21261 (85 FR 65197, October 15, 2020) (AD 2020–20–05).

(c) Applicability

This AD applies to Airbus SAS Model airplanes specified in paragraphs (c)(1) through (4) of this AD, certificated in any category, as identified in European Union Aviation Safety Agency (EASA) AD 2021–0227, dated October 11, 2021 (EASA AD 2021–0227).

(1) Model A318–111, –112, –121, and –122 airplanes.

(2) Model A319–111, –112, –113, –114, –115, –131, –132, and –133 airplanes.

(3) Model A320–211, –212, –214, –216, –231, –232, and –233 airplanes.

(4) Model A321–111, –112, –131, –211, –212, –213, –231, and –232 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports that, during inspections accomplished as specified in certain airworthiness limitation items (ALIs), cracks were detected in the double joggle areas at frame (FR) 16 and FR20 in the nose forward fuselage. The FAA is issuing this AD to address cracks in these areas, which, if not detected and corrected, could reduce the structural integrity of the fuselage.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2021–0227.

(h) Exceptions to EASA AD 2021–0227

(1) Where EASA AD 2021–0227 refers to its effective date, this AD requires using the effective date of this AD.

(2) The “Remarks” section of EASA AD 2021–0227 does not apply to this AD.

(3) Where paragraph (2) of EASA AD 2021–0227 specifies to “contact Airbus for approved repair instructions and, within the compliance time specified therein, accomplish those instructions accordingly” if any cracks are detected, for this AD if any cracking is detected, the cracking must be repaired before further flight using a method approved by Airbus SAS’s EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(4) Where paragraphs (3) and (4) of EASA AD 2021–0227 specify “Airbus approved repair instructions,” or “post-repair

inspection instructions approved by Airbus,” for this AD, to be acceptable for credit, the repair instructions must be approved by Airbus SAS’s EASA DOA. If approved by the DOA, the approval must include the DOA authorized signature.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2021–0227 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Terminating Action for Certain Requirements in AD 2020–20–05

Accomplishing the initial inspections required by this AD terminates ALI Tasks 531153–02–1, 531153–02–2, 531155–02–1 and 531155–02–2, as required by paragraph (i) of AD 2020–20–05 only for the airplanes identified in paragraph (c) of this AD.

(k) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Large Aircraft Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or EASA; or Airbus SAS’s EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraphs (h)(3), (i), and (k)(2) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(l) Related Information

For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, Large Aircraft Section, FAA,

International Validation Branch, 2200 South 216th St., Des Moines, WA 98198; phone 206–231–3229; email vladimir.ulyanov@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021–0227, dated October 11, 2021.

(ii) [Reserved]

(3) For EASA AD 2021–0227, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; internet www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 4, 2022.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–08494 Filed 4–20–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 95

[Docket No. 31426; Amdt. No. 565]

IFR Altitudes; Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts miscellaneous amendments to the required IFR (instrument flight rules) altitudes and changeover points for certain Federal airways, jet routes, or direct routes for which a minimum or maximum en route authorized IFR altitude is prescribed. This regulatory action is needed because of changes occurring in the National Airspace System. These changes are designed to provide for the safe and efficient use of

the navigable airspace under instrument conditions in the affected areas.

DATES: Effective 0901 UTC, May 19, 2022.

FOR FURTHER INFORMATION CONTACT:

Thomas J. Nichols, Flight Procedures and Airspace Group, Flight Technologies and Procedures Division, Flight Standards Service, Federal Aviation Administration. Mailing Address: FAA Mike Monroney Aeronautical Center, Flight Procedures and Airspace Group, 6500 South MacArthur Blvd., Registry Bldg. 29, Room 104, Oklahoma City, OK 73125. Telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION: This amendment to part 95 of the Federal Aviation Regulations (14 CFR part 95) amends, suspends, or revokes IFR altitudes governing the operation of all aircraft in flight over a specified route or any portion of that route, as well as the changeover points (COPs) for Federal airways, jet routes, or direct routes as prescribed in part 95.

The Rule

The specified IFR altitudes, when used in conjunction with the prescribed changeover points for those routes, ensure navigation aid coverage that is adequate for safe flight operations and free of frequency interference. The reasons and circumstances that create

the need for this amendment involve matters of flight safety and operational efficiency in the National Airspace System, are related to published aeronautical charts that are essential to the user, and provide for the safe and efficient use of the navigable airspace. In addition, those various reasons or circumstances require making this amendment effective before the next scheduled charting and publication date of the flight information to assure its timely availability to the user. The effective date of this amendment reflects those considerations. In view of the close and immediate relationship between these regulatory changes and safety in air commerce, I find that notice and public procedure before adopting this amendment are impracticable and contrary to the public interest and that good cause exists for making the amendment effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3)

does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 95

Airspace, Navigation (air).

Issued in Washington, DC, on April 15, 2022.

Thomas J. Nichols,

Manager, Aviation Safety, Flight Standards Service, Standards Section, Flight Procedures & Airspace Group, Flight Technologies and Procedures Division.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, part 95 of the Federal Aviation Regulations (14 CFR part 95) is amended as follows effective at 0901 UTC, June 03, 2010.

PART 95—IFR ALTITUDES

■ 1. The authority citation for part 95 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113 and 14 CFR 11.49(b)(2).

■ 2. Part 95 is amended to read as follows:

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
§ 95.3000 Low Altitude RNAV Routes			
§ 95.3208 RNAV Route T208 Is Amended by Adding			
SIROC, GA WP	SAHND, FL WP	1800	17500
SAHND, FL WP	FOXAM, FL WP	1800	17500
Is Amended To Delete			
WALEE, FL WP	MMKAY, FL WP	2000	17500
MMKAY, FL WP	FOXAM, FL WP	1800	17500
§ 95.3218 RNAV Route T218 Is Amended by Adding			
DLMAR, PA WP	LAAYK, PA FIX	*4900	17500
*4700—MCA LAAYK, PA FIX, W BND			
Is Amended To Delete			
STONYFORK, PA VOR/DME	LAAYK, PA FIX	4200	17500
§ 95.3370 RNAV Route T370 Is Added To Read			
BURBN, TX WP	ZUMKI, TX FIX	*3000	17500
*3700—MCA ZUMKI, TX FIX, E BND			
ZUMKI, TX FIX	RRORY, TX WP	4000	17500
RRORY, TX WP	RAKOC, TX FIX	2400	17500
RAKOC, TX FIX	TASEY, TX WP	2300	17500
TASEY, TX WP	SLOTH, TX WP	2000	17500
SLOTH, TX WP	LOCUS, AR FIX	2000	17500
LOCUS, AR FIX	HAMPT, AR FIX	1900	17500

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
HAMPT, AR FIX	RICKG, AR WP	2000	17500
RICKG, AR WP	EJKN, MS WP	1900	17500
EJKN, MS WP	IZAAC, MS WP	1800	17500
IZAAC, MS WP	TOMLN, MS FIX	*2000	17500
*2200—MCA TOMLN, MS FIX, E BND			
TOMLN, MS FIX	CLOUT, MS FIX	2500	17500
CLOUT, MS FIX	SKNRR, MS WP	2000	17500
SKNRR, MS WP	MINIM, AL FIX	2000	17500
MINIM, AL FIX	BESOM, AL FIX	2300	17500
BESOM, AL FIX	NESTS, AL WP	*2500	17500
*2000—MOCA			
NESTS, AL WP	VLKNN, AL WP	2500	17500

§ 95.3398 RNAV Route T398 Is Added To Read

SLOTH, TX WP	MUFRE, AR FIX	2000	17500
MUFRE, AR FIX	CANEY, AR FIX	2300	17500
CANEY, AR FIX	LITTR, AR WP	2200	17500
LITTR, AR WP	ATERS, AR FIX	2000	17500
ATERS, AR FIX	DRAST, AR FIX	1900	17500
DRAST, AR FIX	EMEEY, AR WP	2000	17500
EMEEY, AR WP	WSTON, MS FIX	2100	17500
WSTON, MS FIX	YUGPU, MS FIX	2000	17500
YUGPU, MS FIX	GOINS, MS WP	2300	17500
GOINS, MS WP	SULLY, MS FIX	2400	17500
SULLY, MS FIX	KERMI, MS FIX	2500	17500
KERMI, MS FIX	AYOTE, AL FIX	2700	17500
AYOTE, AL FIX	HAGIE, AL WP	*2600	17500
*2100—MOCA			
HAGIE, AL WP	MARZZ, AL WP	2500	17500
MARZZ, AL WP	FILUN, AL WP	3000	17500
FILUN, AL WP	COMAR, AL FIX	4100	17500
COMAR, AL FIX	JILIS, GA WP	4600	17500
JILIS, GA WP	CRAND, GA FIX	*3000	17500
*4900—MCA CRAND, GA FIX, E BND			
CRAND, GA FIX	MADOL, GA FIX	*6300	17500
*6400—MCA MADOL, GA FIX, E BND			
MADOL, GA FIX	MELLS, GA FIX	6400	17500
MELLS, GA FIX	BALNN, GA WP	*5900	17500
*6300—MCA BALNN, GA WP, E BND			
BALNN, GA WP	DAYEL, GA FIX	7500	17500
DAYEL, GA FIX	DILLA, GA FIX	7000	17500
DILLA, GA FIX	SUNET, SC FIX	6700	17500
SUNET, SC FIX	RETS, SC FIX	5800	17500
RETS, SC FIX	UNMAN, SC FIX	*5700	17500
*3400—MCA UNMAN, SC FIX, W BND			
UNMAN, SC FIX	BURGG, SC WP	2900	17500
BURGG, SC WP	GAFFE, SC FIX	2900	17500
GAFFE, SC FIX	CRLNA, NC WP	*3400	17500
*2900—MOCA			
CRLNA, NC WP	LOCAS, NC FIX	3100	17500
LOCAS, NC FIX	ZOPOC, NC FIX	2500	17500
ZOPOC, NC FIX	PEKNN, NC FIX	2300	17500
PEKNN, NC FIX	RELPLY, NC FIX	2400	17500
RELPLY, NC FIX	GMINI, NC WP	2400	17500

§ 95.3419 RNAV Route T419 Is Added To Read

MAHTY, AR WP	FRNIA, MO WP	2000	17500
FRNIA, MO WP	SNOWD, MO FIX	2100	17500
SNOWD, MO FIX	MESSR, KY WP	2000	17500
MESSR, KY WP	ROOKE, KY WP	2200	17500
ROOKE, KY WP	WESON, KY FIX	2500	17500
WESON, KY FIX	TERGE, IN WP	2000	17500

§ 95.4000 High Altitude RNAV Routes

§ 95.4019 RNAV Route Q19 Is Amended by Adding

BULZI, FL WP	WYATT, GA FIX	*18000	45000
*18000—GNSS MEA			
*DME/DME/IRU MEA			

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
WYATT, GA FIX *18000—GNSS MEA *DME/DME/IRU MEA	GOONS, GA FIX	*18000	45000
GOONS, GA FIX *18000—GNSS MEA *DME/DME/IRU MEA	LAYIN, AL WP	*18000	45000
LAYIN, AL WP *18000—GNSS MEA *DME/DME/IRU MEA	TOJXE, AL WP	*18000	45000
TOJXE, AL WP *18000—GNSS MEA *DME/DME/IRU MEA	HITMN, TN WP	*18000	45000
HITMN, TN WP *18000—GNSS MEA *DME/DME/IRU MEA	PLESS, IL FIX	*18000	45000
Is Amended To Delete			
NASHVILLE, TN VORTAC *GNSS REQUIRED	PLESS, IL FIX	*18000	45000
§ 95.4030 RNAV Route Q30 Is Amended by Adding			
IZAAC, MS WP *18000—GNSS MEA *DME/DME/IRU MEA	SKNRR, MS WP	*18000	45000
SKNRR, MS WP *18000—GNSS MEA *DME/DME/IRU MEA	VLKNN, AL WP	*18000	45000
Is Amended To Delete			
SIDON, MS VORTAC *GNSS REQUIRED	VULCAN, AL VORTAC	*18000	45000
§ 95.4065 RNAV Route Q65 Is Amended by Adding			
ENEME, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	KERLY, GA WP	*18000	45000
KERLY, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	DAREE, GA WP	*18000	45000
OCASE, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	RINTE, OH WP	*18000	45000
Is Amended To Delete			
ENEME, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	JEFOI, GA WP	*18000	45000
JEFOI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	TRASY, GA WP	*18000	45000
TRASY, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	CESKI, GA WP	*18000	45000
CESKI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	DAREE, GA WP	*18000	45000
OCASE, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	ROSEWOOD, OH VORTAC	*18000	45000
§ 95.4077 RNAV Route Q77 Is Amended by Adding			
WIGVO, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	MELKR, SC WP	*18000	45000
MELKR, SC WP	HRTWL, SC WP	*18000	45000

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
*18000—GNSS MEA *DME/DME/IRU MEA			
§ 95.4079 RNAV Route Q79 Is Amended by Adding			
IISLY, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	ZPLEN, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
ZPLEN, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	THRSR, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
THRSR, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	KAILL, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
KAILL, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	WUDEE, GA FIX *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
WUDEE, GA FIX *18000—GNSS MEA *DME/DME/IRU MEA	RESPE, TN FIX *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
RESPE, TN FIX *18000—GNSS MEA *DME/DME/IRU MEA	SWAPP, TN FIX *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
SWAPP, TN FIX *18000—GNSS MEA *DME/DME/IRU MEA	LOUISVILLE, KY VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
Is Amended To Delete			
IISLY, GA WP *GNSS REQUIRED	YUESS, GA WP *GNSS REQUIRED	*18000	45000
YUESS, GA WP *GNSS REQUIRED	ATLANTA, GA VORTAC *GNSS REQUIRED	*18000	45000
§ 95.4089 RNAV Route Q89 Is Amended by Adding			
YANTI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	HESPI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
HESPI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	CULTO, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
CULTO, GA *18000—GNSS MEA *DME/DME/IRU MEA	WP SMTTH, TN WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
Is Amended To Delete			
YANTI, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	ATLANTA, GA VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
§ 95.4093 RNAV Route Q93 Is Amended by Adding			
QUIWE, SC WP *18000—GNSS MEA *DME/DME/IRU MEA	JEPEX, SC WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
JEPEX, SC WP *18000—GNSS MEA *DME/DME/IRU MEA	BENBY, NC WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
BENBY, NC WP *18000—GNSS MEA *DME/DME/IRU MEA	DOOGE, VA WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
DOOGE, VA WP *18000—GNSS MEA *DME/DME/IRU MEA	HAPKI, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
HAPKI, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	TONIO, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
TONIO, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	OCASE, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000
OCASE, KY WP *18000—GNSS MEA *DME/DME/IRU MEA	HEVAN, IN WP *18000—GNSS MEA *DME/DME/IRU MEA	*18000	45000

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
*18000—GNSS MEA *DME/DME/IRU MEA			
§ 95.4103 RNAV Route Q103 Is Amended by Adding			
SLOJO, SC WP *18000—GNSS MEA *DME/DME/IRU MEA	DANCO, VA WP 	*18000	45000
DANCO, VA WP *18000—GNSS MEA *DME/DME/IRU MEA	ASBUR, WV WP 	*18000	45000
Is Amended To Delete			
SLOJO, SC WP *18000—GNSS MEA *DME/DME/IRU MEA	PULASKI, VA VORTAC 	*18000	*45000
PULASKI, VA VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	ASBUR, WV WP 	*18000	45000
§ 95.4116 RNAV Route Q116 Is Amended by Adding			
SPRINGFIELD, MO VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	ZAVEL, AR WP 	*18000	45000
ZAVEL, AR WP *18000—GNSS MEA *DME/DME/IRU MEA	LUKKY, AR WP 	*18000	45000
LUKKY, AR WP *18000—GNSS MEA *DME/DME/IRU MEA	MEMFS, TN WP 	*18000	45000
MEMFS, TN WP *18000—GNSS MEA *DME/DME/IRU MEA	GOOGY, AL WP 	*18000	45000
GOOGY, AL WP *18000—GNSS MEA *DME/DME/IRU MEA	LOBBS, AL FIX 	*18000	45000
LOBBS, AL FIX *18000—GNSS MEA *DME/DME/IRU MEA	VLKNN, AL WP 	*18000	45000
VLKNN, AL WP *18000—GNSS MEA *DME/DME/IRU MEA	DEEDA, GA WP 	*18000	45000
Is Amended To Delete			
VULCAN, AL VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	DEEDA, GA WP 	*18000	45000
§ 95.4118 RNAV Route Q118 Is Amended by Adding			
BONNT, IN WP *18000—GNSS MEA *DME/DME/IRU MEA	HEVAN, IN WP 	*18000	45000
KAILL, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	THRSR, GA WP 	*18000	45000
THRSR, GA WP *18000—GNSS MEA *DME/DME/IRU MEA	JOHNN, GA WP 	*18000	45000
Is Amended To Delete			
MARION, IN VOR/DME *GNSS REQUIRED	HEVAN, IN WP 	*18000	45000
KAILL, GA VORTAC *GNSS REQUIRED	ATLANTA, GA VORTAC 	*18000	45000
ATLANTA, GA VORTAC *GNSS REQUIRED	JOHNN, GA WP 	*18000	45000

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
§ 95.4139 RNAV Route Q139 Is Added To Read			
MGMRY, AL WP *18000—GNSS MEA *DME/DME/IRU MEA	VLKNN, AL WP SALMS, TN FIX HITMN, TN WP LOUISVILLE, KY VORTAC GBEES, IN FIX HICKI, IN FIX CREEP, OH FIX	*18000 *18000 *18000 *18000 *18000 *18000 *18000	45000 45000 45000 45000 45000 45000 45000
§ 95.4140 RNAV Route Q140 Is Amended by Adding			
KODEY, NY FIX *18000—GNSS MEA *DME/DME/IRU MEA	ARRKK, NY WP RODYY, NY WP	*18000 *18000	45000 45000
Is Amended To Delete			
KODEY, NY FIX *GNSS REQUIRED	ARKKK, NY WP RODYY, NY WP	*18000 *18000	45000 45000
§ 95.4184 RNAV Route Q184 Is Added To Read			
RANGER, TX VORTAC *18000—GNSS MEA *DME/DME/IRU MEA	DOBIS, LA WP BERKE, LA FIX MIXIE, LA FIX STAGE, LA FIX KAMEN, LA FIX SARKK, MS WP MERDN, MS WP KWANE, MS WP	*18000 *18000 *18000 *18000 *18000 *18000 *18000 *18000	45000 45000 45000 45000 45000 45000 45000 45000

REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT—Continued

[Amendment 565 effective date May 19, 2022]

From	To	MEA	MAA
*DME/DME/IRU MEA			

§ 95.4812 RNAV Route Q812 Is Amended by Adding

LOXXE, NY FIX	ARRKK, NY WP	*18000	45000
*18000—GNSS MEA			
*DME/DME/IRU MEA			
ARRKK, NY WP	STOMP, NY FIX	*18000	45000
*18000—GNSS MEA			
*DME/DME/IRU MEA			

Is Amended To Delete

LOXXE, NY FIX	ARKKK, NY WP	*18000	45000
*GNSS REQUIRED			
ARKKK, NY WP	STOMP, NY FIX	*18000	45000
*GNSS REQUIRED			

From	To	MEA
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§ 95.6001 Victor Routes—U.S**§ 95.6081 VOR Federal Airway V81 Is Amended To Read in Part**

PUEBLO, CO VORTAC	*BLACK FOREST, CO VOR/DME	9500
*10000—MCA BLACK FOREST, CO VOR/DME, NW BND		

§ 95.6120 VOR Federal Airway V120 Is Amended To Read in Part

SIOUX FALLS, SD VORTAC	BILOO, IA FIX	*5000
*3600—MOCA		

§ 95.6165 VOR Federal Airway V165 Is Amended To Read in Part

VALEY, CA FIX	*SAUGS, CA FIX	6200
*6700—MCA SAUGS, CA FIX, NW BND		
NEWBERG, OR VOR/DME	PIITER, OR FIX	4400

§ 95.6247 VOR Federal Airway V247 Is Amended To Read in Part

BAXTA, MT FIX	WAUTS, MT FIX	*13000
*11200—MOCA		
WAUTS, MT FIX	HELENA, MT VORTAC.	9600
W BND		13000
E BND		

From	To	MEA	MAA
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§ 95.7001 Jet Routes**§ 95.7093 Jet Route J93 Is Amended To Read in Part**

U.S. MEXICAN BORDER	JULIAN, CA VORTAC	18000	37000
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Airway Segment		Changeover Points	
From	To	Distance	From

§ 95.8005 Jet Routes Changeover Points J54 Is Amended To Add Changeover Point

POCATELLO, ID VOR/DME	CHEROKEE, WY VOR/DME	95	POCATELLO.
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ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 52**

[EPA–R09–OAR–2022–0173; FRL–9702–02–R9]

Air Plan Approval; Nevada; Clark County Department of Environment and Sustainability**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a revision to the Clark County Department of Environment and Sustainability (DES) portion of the Nevada State Implementation Plan (SIP). This revision clarifies and amends an administrative rule consistent with changes to state statutes and county code.

DATES: This rule is effective on June 21, 2022 without further notice, unless the EPA receives adverse comments by May 23, 2022. If we receive such comments, we will publish a timely withdrawal in the **Federal Register** to notify the public that this direct final rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–

OAR–2022–0173 at <https://www.regulations.gov>. For comments submitted at [Regulations.gov](https://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](https://www.regulations.gov). The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. If you need assistance in a language other than English or if you are a person with

disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Christine Vineyard, EPA Region IX, 75 Hawthorne St., San Francisco, CA 94105. By phone: (415) 947–4125 or by email at vineyard.christine@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, “we,” “us,” and “our” refer to the EPA.

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I. The State’s Submittal*A. What rule did the State submit?*

Table 1 lists the rule addressed by this action with the dates that it was adopted by the Clark County DES and submitted by the Nevada Division of Environmental Protection (NDEP).

TABLE 1—SUBMITTED RULE

Local agency	Rule No.	Rule title	Revised	Submitted
Clark County DES	Section 4	Control Officer	12/17/19	3/16/20 ¹

On September 16, 2020, the submitted rule in Table 1 was deemed to be complete by operation of law to meet the completeness criteria in 40 CFR part 51 Appendix V, which must be met before formal EPA review.

B. Are there other versions of this rule?

We approved an earlier version of Section 4, Subsections 4.1–4.11 (excluding subsection 4.7.3), into the SIP on August 27, 1981 (46 FR 43141); Subsection 4.7.3 on June 18, 1982 (47 FR 26386); and Subsections 4.12, 4.12.1, 4.12.2 and 4.12.3 on August 27, 1981 (46 FR 43141). The Clark County DES adopted revisions to the SIP-approved version on December 17, 2019, and NDEP submitted it to us on March 16, 2020.

C. What is the purpose of the submitted rule revision?

Clark County DES Section 4 provides the Control Officer with certain authorities and establishes certain duties that the Control Officer must fulfill. The authorities covered in Section 4 include such authorities as the authority to enter and inspect any property where emissions sources are located, the authority to require owners or operators of stationary sources to provide emissions-related information and the authority to require source testing. Duties under Section 4 include, among others, the duty to initiate enforcement proceedings (under certain circumstances) and the duty to notify the public on a regular basis of instances or areas in which any ambient air quality standard was exceeded during any portion of the preceding calendar year. The purpose of this submitted rule revision is to clarify the authorities and duties of the Control Officer and to

conform Section 4 with related changes made to the Nevada Revised Statutes (NRS) and to Clark County Code.

The EPA’s technical support document (TSD) and submitted staff report have more information about these rules.

II. The EPA’s Evaluation and Action*A. How is the EPA evaluating the rule?*

As a general matter, rules in the SIP must be enforceable (see CAA section 110(a)(2)), must not interfere with applicable requirements concerning attainment and reasonable further progress or other CAA requirements (see CAA section 110(l)), and must not modify certain SIP control requirements in nonattainment areas without ensuring equivalent or greater emissions reductions (see CAA section 193). This SIP revision involves an administrative rule that establishes authorities to take certain actions necessary to enforce SIP emissions limitations and establishes

¹ NDEP submitted amended Clark County DES Section 4 to the EPA electronically on March 16, 2020, as an attachment to a letter dated March 13, 2020.

certain obligations to initiate enforcement proceedings and to notify the public of certain air-quality-related information. Relevant regulatory provisions include 40 CFR 51.230 (“Requirements for all plans”) and 40 CFR 51.285 (“Public notification”).

Guidance and policy documents that we generally use to evaluate enforceability, revision/relaxation and rule stringency requirements for the applicable criteria pollutants include the following:

1. “State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990,” 57 FR 13498 (April 16, 1992); 57 FR 18070 (April 28, 1992).
2. “Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations,” EPA, May 25, 1988 (the Bluebook, revised January 11, 1990).
3. “Guidance Document for Correcting Common VOC & Other Rule Deficiencies,” EPA Region 9, August 21, 2001 (the Little Bluebook).

B. Does the rule meet the evaluation criteria?

This rule is consistent with CAA requirements and the relevant regulatory provisions at 40 CFR 51.230 and 40 CFR 51.285. The TSD has more information on our evaluation.

C. Public Comment and Final Action

As authorized in section 110(k)(3) of the Act, the EPA is fully approving the submitted rule because we believe it fulfills all relevant requirements.² We do not think anyone will object to this approval, so we are finalizing it without proposing it in advance. However, we are simultaneously proposing approval of the same submitted rule elsewhere in this issue of the **Federal Register**. If we receive adverse comments by May 23, 2022, we will publish a timely withdrawal in the **Federal Register** to notify the public that the direct final approval will not take effect and we will address the comments in a subsequent final action based on the proposal. If we do not receive timely adverse comments, the direct final approval will be effective without further notice on June 21, 2022. This will incorporate the rule into the federally enforceable SIP.

III. Incorporation by Reference

In this rule, the EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR

51.5, the EPA is finalizing the incorporation by reference of Clark County DES Section 4 described in Section I of this preamble and set forth below in the amendments to 40 CFR part 52. Therefore, this material has been approved by EPA for inclusion in the State Implementation Plan, have been incorporated by reference by EPA into that plan, are fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA’s approval, and will be incorporated by reference in the next update to the SIP compilation.³ The EPA has made, and will continue to make, these documents available through www.regulations.gov and at the EPA Region IX Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information).

IV. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA’s role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or

safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and

- Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by June 21, 2022. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the proposed rules section

² Upon the effective date of this final action, Clark County DES Section 4 will supersede existing Clark County District Board of Health Air Pollution Control Regulation Section 4, approved at 46 FR 43141 (August 27, 1981) and at 47 FR 26386 (June 18, 1982), in the applicable SIP.

³ 62 FR 27968 (May 22, 1997).

of this **Federal Register**, rather than file an immediate petition for judicial review of this direct final rule, so that the EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate

matter, Reporting and recordkeeping requirements, Sulfur Oxides, Volatile organic compounds.

Dated: April 13, 2022.

Deborah Jordan,

Acting Regional Administrator, Region IX.

Part 52, Chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart DD—Nevada

■ 2. In § 52.1470(c), Table 3 is amended by revising the entry for “Section 4: Subsections 4.1–4.11 (excluding subsection 4.7.3)” and removing the entries for “Section 4 (Control Officer): Subsection 4.7.3” and “Section 4 (Control Officer): Subsections 4.12, 4.12.1–4.12.3” to read as follows:

§ 52.1470 Identification of plan.

* * * * *

(c) * * *

TABLE 3—EPA-APPROVED CLARK COUNTY REGULATIONS

County citation	Title/subject	County effective date	EPA approval date	Additional explanation
* * * * *				
Section 4	Control Officer	12/17/19	[INSERT Federal Register CITATION], 4/21/22.	Submitted electronically on March 16, 2020, as an attachment to a letter dated March 13, 2020.
* * * * *				

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[FR Doc. 2022–08422 Filed 4–20–22; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 220414–0097; RTID 0648–XB848]

Fisheries of the Northeastern United States; Monkfish Fishery; 2022 Monkfish Specifications

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: We are implementing specifications for the 2022 monkfish fishery. This action is necessary to ensure allowable monkfish harvest levels that will prevent overfishing and allow harvesting of optimum yield. This action is intended to establish the allowable 2022 harvest levels, consistent with the Monkfish Fishery Management Plan and previously announced multi-year specifications.

DATES: The final specifications for the 2022 monkfish fishery are effective May 1, 2022, through April 30, 2023.

FOR FURTHER INFORMATION CONTACT: Spencer Talmage, Fishery Management Specialist, (978) 281–9232.

SUPPLEMENTARY INFORMATION: The New England and Mid-Atlantic Fishery Management Councils jointly manage the monkfish fishery. The Monkfish Fishery Management Plan includes a specifications process that requires the

Councils to recommend quotas on a triennial basis. This action finalizes 2022 specifications approved by the Councils in Framework Adjustment 12 to the Monkfish Fishery Management Plan, which included specifications for fishing years 2020–2022.

On September 17, 2020, we approved Framework 12 measures for the 2020 fishing year (85 FR 57986), based on a recent stock assessment update and consistent with the New England Council’s Scientific and Statistical Committee recommendations. At that time, we also projected a continuation of those same specifications for 2021 and 2022. Final 2022 total allowable landings in both the Northern and Southern Fishery Management Areas are summarized in Table 1. These 2022 measures are the same as those implemented in 2020 and 2021. All other requirements remain the same.

TABLE 1—MONKFISH SPECIFICATIONS FOR FISHING YEAR 2022

[In metric tons]

Catch limits	Northern area	Southern area
Acceptable Biological Catch	8,351	12,316.
Annual Catch Limit	8,351	12,316.
Management Uncertainty	3 percent	3 percent.
Annual Catch Target (Total Allowable Landings + discards)	8,101	11,947.
Discards	1,477	6,065.
Total Allowable Landings	6,624	5,882.

We have reviewed available 2020 and 2021 fishery information. There have been no annual catch limit overages, nor is there any new biological information that would require altering the projected 2022 specifications. Based on this, we are implementing the fishing year 2022 specifications announced in the Framework 12 final rule (85 FR 57986, September 17, 2020). The 2022 specifications will be effective until April 30, 2023.

Classification

Pursuant to section 304(b)(3) of the Magnuson-Stevens Act, the NMFS Assistant Administrator has determined that this final rule is consistent with the Monkfish Fishery Management Plan, other provisions of the Magnuson-Stevens Act, and other applicable law.

This final rule is exempt from review under Executive Order 12866.

Pursuant to 5 U.S.C. 553(b)(B), we find good cause to waive prior public notice and opportunity for public comment on the catch limit and allocation adjustments because allowing time for notice and comment is unnecessary. The Framework 12 proposed rule provided the public with the opportunity to comment on the 2020–2022 specifications (85 FR 39157, June 30, 2020). No comments were received on the proposed rule. Thus, the proposed and final rules that contained

the projected 2020–2022 specifications provided a full opportunity for the public to comment on the substance and process of this action. Furthermore, no circumstances or conditions have changed in the monkfish fishery that would cause new concern or necessitate reopening the comment period. Finally, the final 2022 specifications being implemented by this rule are unchanged from those projected in the Framework 12 final rule.

There is good cause under 5 U.S.C. 553(d) to establish an effective date less than 30 days after date of publication. This action provides notice of monkfish fishery specifications for the 2022 fishing year, which begins on May 1, 2022. As stated, final 2022 specifications are unchanged from those projected in the Framework 12 final rule, and so industry participants expect timely implementation of this action. A 30-day delayed effectiveness for this action would result in rollover of specifications from the 2021 fishing year, until this final rule becomes effective. The disruption caused by a rollover of 2021 specifications would result in negative impacts to the industry and public by producing confusion and complication to catch accounting processes. For these reasons, the 30-delayed effectiveness period would undermine management objectives of the FMP and cause

unnecessary negative economic or other impacts to the monkfish fishery.

The Chief Counsel for Regulation, Department of Commerce, previously certified to the Chief Counsel for Advocacy of the Small Business Administration that the 2020–2022 monkfish specifications would not have a significant economic impact on a substantial number of small entities. Implementing status quo specifications for 2022 will not change the conclusions drawn in that previous certification to the SBA. Because advance notice and the opportunity for public comment are not required for this action under the Administrative Procedure Act, or any other law, the analytical requirements of the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, do not apply to this rule. Therefore, no new regulatory flexibility analysis is required and none has been prepared.

This final rule contains no information collection requirements under the Paperwork Reduction Act of 1995.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: April 18, 2022.

Samuel D. Rauch, III,
*Deputy Assistant Administrator for
Regulatory Programs, National Marine
Fisheries Service.*

[FR Doc. 2022–08541 Filed 4–20–22; 8:45 am]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register

Vol. 87, No. 77

Thursday, April 21, 2022

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

OFFICE OF GOVERNMENT ETHICS

5 CFR Parts 2634 and 2635

RIN 3209-AA50

Legal Expense Fund Regulation

AGENCY: Office of Government Ethics.

ACTION: Proposed rule.

SUMMARY: The U.S. Office of Government Ethics (OGE) is proposing to add a new subpart to the Standards of Ethical Conduct for Employees of the Executive Branch (Standards). The new subpart contains the standards for an employee's acceptance of payments for legal expenses through a legal expense fund and an employee's acceptance of *pro bono* legal services for a matter arising in connection with the employee's official position, the employee's prior position on a campaign of a candidate for President or Vice President, or the employee's prior position on a Presidential Transition Team. OGE is also proposing to make related amendments to the portions of the Standards that govern the solicitation and acceptance of gifts from outside sources and the portions of the Executive Branch Financial Disclosure regulation that govern confidential financial disclosure reports.

DATES: Written comments are invited and must be received on or before June 21, 2022.

ADDRESSES: You may submit comments, in writing, to OGE on this proposed rule, identified by RIN 3209-AA50, by any of the following methods:

Email: usoge@oge.gov. Include the reference "Proposed Rule: Legal Expense Fund Regulation" in the subject line of the message.

Fax: (202) 482-9237.

Mail: Office of Government Ethics, Suite 500, 1201 New York Avenue NW, Washington, DC 20005-3917, Attention: "Proposed Rule: Legal Expense Fund Regulation."

Instructions: All submissions must include OGE's agency name and the Regulation Identifier Number (RIN),

3209-AA50, for this proposed rulemaking. All comments, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. Comments may be posted on OGE's website, www.oge.gov. Sensitive personal information, such as account numbers or Social Security numbers, should not be included. Comments generally will not be edited to remove any identifying or contact information.

FOR FURTHER INFORMATION CONTACT:

Maura Leary, Assistant Counsel, or Heather Jones, Senior Counsel for Financial Disclosure, General Counsel and Legal Policy Division, Office of Government Ethics, Suite 500, 1201 New York Avenue NW, Washington, DC 20005-3917; Telephone: (202) 482-9300; TTY: (800) 877-8339; FAX: (202) 482-9237.

SUPPLEMENTARY INFORMATION:

I. Background

There is currently no statutory or regulatory framework in the executive branch for establishing a legal expense fund (LEF), and the U.S. Office of Government Ethics (OGE) has not approved or disapproved any specific LEFs. In the legislative branch, LEFs are governed by House and Senate LEF regulations. *See* House Committee on Ethics, "Contributions to a Legal Expense Fund," U.S. House of Representatives, <https://ethics.house.gov/sites/ethics.house.gov/files/Pink%20Sheet%20With%20Regs.pdf>; Senate Select Committee on Ethics, *Senate Ethics Manual*, Government Printing Office, 2003, <https://www.ethics.senate.gov/downloads/pdf/files/manual.pdf>, pages 30-31. OGE's role has been limited to providing guidance to help ensure that executive branch employees who may receive distributions from an LEF will be in compliance with existing ethics laws and rules, such as the gift rules, if they accept such a distribution. *See* OGE Legal Advisory LA-17-10 (Sept. 28, 2017). However, this limited approach to LEFs lacked transparency and created concerns regarding the appearance of corruption in the creation and operation of LEFs for the benefit of executive branch employees. *See* Letter from Emory Rounds, Director, Office of Gov't Ethics, to Sen. Margaret Wood Hassan, *et al.*, Sept. 11, 2018, <https://www.oge.gov/Web/OGE.nsf/>

Congressional%20Correspondence/495516AF975202A7852585B6005A1FE4/\$FILE/Letter%20to%20Senators%20Hassan,%20Carper,%20Peters,%20Jones,%20and%20Harris.pdf?open. As a result, OGE began the process of drafting an LEF regulation with a series of public input opportunities to "allow the creation of a regulation that will ensure that [LEFs] with executive branch employee recipients will be transparent, open, and accessible to the public." *Id.*

On April 15, 2019, OGE sought stakeholder input on issues specifically related to LEFs through an advance notice of proposed rulemaking (ANPRM). *See* Notice and Request for Comments: Legal Expense Fund Regulation, 84 FR 15146 (Apr. 15, 2019). In response to this ANPRM, OGE received written comments and heard testimony at a virtual public hearing on May 22, 2019. *See* <https://www.oge.gov/Web/oge.nsf/Resources/Rulemaking> (providing written comments and hearing transcript). OGE also solicited and considered the views of executive branch agency ethics officials. On September 26, 2019, OGE invited all interested members of the public and agency ethics officials to share ideas, provide information, and express concerns at two public meetings about specific topics related to LEFs. *See* Announcement of Public Meeting: Legal Expense Fund Regulation, 84 FR 50791 (Sept. 26, 2019). These meetings allowed interested groups to hear and respond to the concerns of other affected persons and helped OGE to further understand the views of various constituencies. *See* <https://www.oge.gov/Web/oge.nsf/Resources/Rulemaking> (providing meeting agendas, lists of attendees, and lists of topics discussed). OGE also provided for an additional comment period. *See id.*

After considering this public input, OGE is proposing an LEF regulation that creates the framework to govern an employee's acceptance of both payments for legal expenses through an LEF and *pro bono* legal services for matters arising in connection with the employee's official position, the employee's prior position on a campaign of a candidate for President or Vice President, or the employee's prior position on a Presidential Transition Team. The proposed regulation will

more clearly spell out who is a prohibited donor, establish donation caps, and require transparency in the form of quarterly, publicly available reports.

OGE has consulted with the Department of Justice and the Office of Personnel Management pursuant to section 201(a) of Executive Order 12674, as modified by Executive Order 12731, and the authorities contained in titles I and IV of the Ethics in Government Act of 1978.

II. Analysis of Proposed Rule Amendments

OGE is proposing to add a new subpart J to the Standards of Ethical Conduct for Employees of the Executive Branch (Standards). The new subpart contains the standards for an employee's acceptance of payments for legal expenses through an LEF and an employee's acceptance of *pro bono* legal services for matters arising in connection with the employee's past or current official position, the employee's prior position on a campaign of a candidate for President or Vice President, or the employee's prior position on a Presidential Transition Team (hereafter referred to as "covered legal matters"). OGE has authority to issue a legal expense fund regulation pursuant to title IV of the Ethics in Government Act of 1978; sections 201(a) and 403 of Executive Order 12674 (as modified by E.O. 12731), and 5 U.S.C. 7301, 7351(c), and 7353(b)(1). OGE is also proposing to make related amendments to the portions of the Standards that govern the solicitation and acceptance of gifts from outside sources in subpart B ("gift rules"). Chiefly, OGE is proposing a new exception to the gift rules for legal expense payments or services for covered legal matters, so long as the payments or services are provided in accordance with proposed subpart J. Finally, OGE is proposing to make related amendments to the portions of the Executive Branch Financial Disclosure regulation that govern confidential financial disclosure reports.

Under the proposed amendments, employees must comply with proposed subpart J to accept legal expense payments from LEFs or *pro bono* legal services for any covered legal matters. However, proposed subpart J contemplates that, to the extent a gift exclusion or exception in subpart B (e.g., gifts based on a personal relationship; gifts of discounts and similar benefits; employee benefits plans maintained by current or former employers) applies, an employee may continue to use those means to accept

legal expense payments or services for covered legal matters instead of establishing an LEF under subpart J. The employee is required to comply with proposed subpart J or use a gift exclusion or exception in subpart B regardless of whether payments are given from a prohibited source or given because of the employee's official position.

A. Subpart J of the Standards

Proposed subpart J contains the standards for the creation, administration, and termination of an LEF that is established to receive contributions and to make distributions of legal expense payments for covered legal matters. Proposed subpart J also contains the standards for an employee's acceptance of *pro bono* legal services for covered legal matters.

Proposed § 2635.1002: Applicability and Related Considerations

Proposed § 2635.1002 describes the covered legal matters for which an employee must comply with proposed subpart J to accept legal expense payments or *pro bono* legal services. Given the nature of the covered legal matters and their connection to the employee's government position, OGE believes it is necessary to regulate legal expense payments for covered legal matters through proposed subpart J to help ensure that employees avoid any action that might result in or create the appearance of using public office for private gain. In contrast, OGE believes that the gift rules in subpart B of the Standards are appropriate to govern gifts of legal expense payments for personal matters. Such gifts, which are not distinguishable from other personal gifts, may be accepted, for example, under the personal relationship exception or as a discount or similar benefit. These gifts do not trigger the heightened concern of payments for legal expenses arising from an employee's official position. Therefore, proposed section 1002 excludes payments for legal expenses arising from personal matters from coverage by this subpart. This treatment is largely consistent with House and Senate LEF regulations.

Proposed § 2635.1002 also makes clear that employees may accept a payment for legal expenses without having to establish and administer an LEF if that payment is otherwise permissible under a gift exclusion or exception in subpart B. When soliciting public input, OGE received a number of comments expressing concern that a legal expense fund regulation would restrict employees from accessing legal

services through other allowable means. To the extent that these other means are permissible under a gift exclusion or exception in subpart B (e.g., gifts based on a personal relationship; gifts of discounts and similar benefits; employee benefits plans maintained by current or former employers), an employee may continue to use those means to accept legal expense payments or services for covered legal matters instead of establishing an LEF under subpart J. OGE welcomes comment on the continued use of these exceptions for legal expense payments.

Finally, proposed § 2635.1002 reminds employees that, in addition to the rules set out in subpart J, other provisions in the Standards continue to apply to employees. Subpart J does not override these rules, and employees must ensure that they continue to abide by them. The proposed section sets out relevant related considerations for employees (e.g., gifts between employees, impartiality concerns) when accepting payments for legal expenses through an LEF or accepting *pro bono* legal services. For example, the creation and administration of an LEF may only be done in the employee's personal capacity. As a result, the payments must be solicited and accepted consistent with the provisions in subpart G of the Standards relating to the use of public office for private gain, use of nonpublic information, use of government property, and use of government time. However, this section is not all-inclusive, and employees are strongly encouraged to consult with their agency ethics officials on the application of these rules to their proposed activities.

Proposed § 2635.1003: Definitions

Proposed § 2635.1003 sets out the applicable definitions for subpart J. Although the definitions set forth in this section are largely self-explanatory, the importance of these terms in determining the coverage of this regulation warrants additional emphasis. This section defines the term "legal expense payment," which is the type of payment covered by this regulation. This section also defines "legal expense fund," a fund established, in accordance with subpart J, to receive contributions and to make distributions of the legal expense payments. The definitions of "arising in connection with the employee's past or current official position," "arising in connection with the employee's prior position on a Presidential Transition Team," and "arising in connection with the employee's prior position on a campaign" are also threshold concepts in determining whether the legal matter

for which an employee beneficiary seeks to accept legal expense payments is covered by this subpart. Covered legal matters can include bringing a legal claim or being subject to a claim. If the employee's legal matter does not fall within one of these three definitions, it will be considered to be personal and will not be covered by this subpart.

Proposed § 2635.1004: Establishment

Proposed § 2635.1004 sets out the standards for establishing an LEF. OGE is proposing to require that all LEFs be structured as trusts with a single beneficiary. OGE received many comments expressing a strong preference for LEFs to be structured exclusively as trusts. The commenters emphasized that the trust structure creates a fiduciary duty between the trustee and beneficiary that, in the words of one public interest organization, "provide[s] the best protection for public servants, who could be certain that the distributions will not be withheld or disbursed according to political pressures." Although other structures, such as LLCs, partnerships, and 527 organizations, were considered, such entities would not provide similar protections. Additionally, most commenters strongly supported allowing only a single, named beneficiary of an LEF trust. In written comments and statements during the public meetings, commenters repeatedly objected to permitting group LEFs. Several commenters voiced an overriding concern about the appearance of corruption resulting from discretionary distributions from a group LEF to employees, as well as the difficulty of properly and meaningfully screening for prohibited donors.

OGE shares these appearance concerns. Accordingly, the proposed regulation requires that employees who wish to establish a legal expense fund do so through a trust with a single, named beneficiary. OGE recognizes, however, that the financial costs and personal burdens associated with establishing a trust can create significant barriers to entry for many employees who are not wealthy, well-connected, or well-known. OGE's proposed alternative mechanisms to receive or pay for legal services—such as *pro bono* legal services, assistance from employee welfare organizations, and existing gift rule exceptions—address some of the access concerns for employees who do not have the financial or other means to establish or effectively raise money through an LEF. However, given the concern that the single-beneficiary trust structure may prevent some executive branch employees from receiving

financial assistance, OGE is soliciting additional comment on single-beneficiary versus multiple-beneficiary trusts.

Proposed § 2635.1004 sets out limitations on who may serve as an LEF trustee. The section requires legal expense funds to be administered by a trustee who is not: (1) The employee beneficiary, (2) their spouse, parent, or child, (3) another federal employee, (4) an agent of a foreign government, (5) a lobbyist, or (6) a person who has interests substantially affected by the performance or nonperformance of the employee beneficiary's official duties. These limitations are proposed to ensure that the trustee is independent from the employee beneficiary and can perform the trustee's fiduciary duties without interference. Several commenters emphasized the importance of such limitations on who may serve as trustee.

Proposed § 2635.1004 further requires employees seeking to establish an LEF to submit an LEF trust document to the employee's Designated Agency Ethics Official (DAEO) for approval, unless the employee is an anonymous whistleblower who chooses to submit the document to OGE for review and approval. The DAEO must then review the LEF trust document for compliance with the regulation. If the LEF trust document is compliant, the DAEO must approve the document. Once the DAEO approves the LEF trust document, the signed document must be forwarded to OGE within seven calendar days. At that point, the employee beneficiary may begin to accept contributions and distributions through the LEF. OGE believes agency ethics officials should initially review and approve LEF trust documents, as the executive branch ethics program has a decentralized structure in which agency ethics officials have primary responsibility for their agency's ethics program. These ethics officials understand the work of the agency and are best suited to be able to identify potential conflicts of interest.

However, OGE recognizes the need for heightened scrutiny and consistency across the executive branch with regard to the most senior executive branch employees. Accordingly, OGE will conduct a secondary review of the LEF trust documents of the employees whose financial disclosure reports are reviewed by OGE pursuant to the Ethics in Government Act, 5 U.S.C. app. 103, as well as the documents of all White House Office and Office of the Vice President employees. OGE will review the LEF trust document to determine whether it conforms with the requirements established by this

subpart. During this review period, an employee beneficiary may continue to accept contributions and distributions through the DAEO-approved LEF trust. However, if the LEF trust document is defective or non-compliant, OGE will notify the approving agency and the employee beneficiary or the employee beneficiary's trustee or representative, who will have 30 calendar days to take necessary corrective action.

Additionally, OGE will review and approve LEF trust documents for anonymous whistleblowers who elect not to file with their agency. In that unusual circumstance, the agency DAEO will not be made aware of an anonymous whistleblower's trust documents in order to screen for potential conflicts requiring recusal. OGE believes the importance of anonymity for whistleblowers outweighs the benefit gained by agency ethics officials being able to screen for potential conflicts, because the potential donors most likely to present significant conflicts issues are prohibited from donating to LEFs. In addition, OGE will review the trust documents of anonymous whistleblowers for conflicts of interest, which could lead to the employee returning donations or recusing from conflicts, as needed.

Under proposed section 2635.1004, employee beneficiaries are required to have the trust document approved by the DAEO before being able to accept contributions. This step mirrors the procedures used by the legislative branch and ensures that the LEF will be in compliance with the proposed rule. All approved, signed LEF trust documents, except for those of anonymous whistleblowers, will be made publicly available on OGE's website. Although employees may only establish or maintain one LEF trust at a time, if multiple legal matters arise at the same time, the scope of an existing trust may be amended. If a second legal issue arises, that employee may establish a second fund for that separate legal matter after that employee has terminated the first LEF.

Proposed § 2635.1005: Administration

Proposed § 2635.1005, in conjunction with proposed § 2635.1006, sets out the standards for the administration of an LEF. In response to various comments on the importance of having an independent trustee with a fiduciary duty to the employee beneficiary, proposed § 2635.1005 specifies the duties and powers of the trustee as the fiduciary for the employee beneficiary. This section also makes clear that an employee beneficiary may not exercise control over the LEF property, which

further ensures the trustee's independence.

Proposed § 2635.1006: Contributions and Use of Funds

Proposed § 2635.1006 provides that an LEF may only accept contributions of payments for legal expenses from permissible donors, and lists the types of donors who are prohibited. OGE modeled this section after the House and Senate LEF rules, which list the types of donors who are (and are not) permitted to donate. OGE believes that providing a list of prohibited donors will assist the trustee in complying with this section, and will result in increased transparency for the public about who is a prohibited donor. Inherent in this process is the expectation that the trustee will need to consult with the DAEO as needed.

Many commenters shared similar views on the types of donors most likely to raise potential appearance of corruption concerns. Several commenters also sought a prohibition on donations from organizations because the source of an organization's funding may be unknown to an employee beneficiary and the agency ethics official. Although the House and Senate LEF rules do not prohibit most donations from organizations, OGE nonetheless believes that limiting the donors to individuals will provide additional safeguards against corruption and the appearance of corruption, as well as provide for easier screening by the trustee. Currently, OGE has proposed only a narrow exception permitting donations from a national committee of a political party or donations from campaigns, in the case of former members of a campaign of a candidate for President or Vice President. This narrow exception only applies if the donation is not otherwise prohibited by law and the entity is not substantially affected by the performance or nonperformance of an employee beneficiary's official duties. OGE believes that existing campaign finance rules provide sufficient transparency. However, OGE is soliciting additional comment on expanding the exception to allow certain nonprofit organizations, such as 501(c)(3) and 501(c)(4) organizations, to donate to an employee's LEF.

With regard to individual contribution limits, commenters proposed amounts ranging from \$5,000 to \$250,000. House LEF rules limit contributions to \$5,000 per year, while Senate LEF rules limit contributions to \$10,000 per year. OGE is proposing a contribution limit of \$10,000 per year from any single permissible donor.

OGE's proposed annual limit is consistent with the annual limit imposed by the Senate. OGE believes that this limit, combined with the proposed requirement that contributions generally must come from individuals, adequately balances an employee beneficiary's need for legal expense payments with potential appearance of corruption concerns. The proposed approach, which places no limit on the number of donors, prevents employees from relying on any single source for donations. OGE welcomes comment on this proposed approach.

Proposed § 2635.1006 also sets out the permissible uses of funds. Several commenters emphasized the importance of limiting the use of LEF payments to those uses related to defraying the employee's legal costs, and not allowing use for other reasons, such as partisan political purposes. OGE agrees, and included this requirement in the regulation in order to clarify the fiduciary responsibilities of the trustee and to reassure the public and donors that the donations are being used for legal expenses as defined in this subpart.

Proposed § 2635.1007: Reporting Requirements

Proposed § 2635.1007 sets out the quarterly and employment termination reporting requirements. OGE received many comments stating that contributions and distributions through LEFs should be made publicly available on a regular basis. Most of the comments OGE received suggested that OGE make quarterly reports available to the public, which mirrors the LEF reporting requirements of the legislative branch. OGE has incorporated this requirement into the proposed regulation, and set the proposed reporting threshold at \$250, which is the threshold set in the House LEF rules and higher than the \$25 threshold set in the Senate LEF rules.

The proposed regulation requires agency ethics officials to review the quarterly reports of most employees for compliance with the regulation. The proposed regulation also requires OGE to conduct a secondary review of the quarterly reports of the most senior employees, as well as anonymous whistleblowers who elect not to file with their agency. As with the initial certification, trustees filing quarterly reports should consult with agency ethics officials when necessary. When approving a report filed under this section, agency ethics officials will make determinations to the best of their ability based on the information they have been provided. If an improper

donation is discovered in the course of the review or by the public at a later time, the beneficiary, with the assistance of the trustee, must return the donation.

Under the proposed rule, all quarterly reports, except for those of anonymous whistleblowers, will be made publicly available on OGE's website. The primary goal of the public posting requirement is transparency. In 2004, OGE issued a letter stating that the public reporting provisions of the Ethics in Government Act (EIGA) constitute the exclusive authority under OGE's jurisdiction to require public financial disclosure. OGE Inf. Adv. Op. 04x3 (Apr. 19, 2004). This statement stems from the following language in EIGA: "[T]he provisions of this title [title I] requiring the reporting of information shall supersede any *general* requirement under any other provision of law or regulation with respect to the reporting of information required for purposes of preventing conflicts of interest or apparent conflicts of interest." 5 U.S.C. app. 107(b) (emphasis added). OGE does not consider the proposed LEF reporting requirement to be a "general" public financial disclosure reporting requirement that would be superseded by EIGA. The reporting provision is not "applicable to the occupants of positions . . . that are categorized by the provision in general terms." See 4B Op. O.L.C. 566 (Apr. 11, 1980) (discussing the prerequisites for the supersession by EIGA of a statutory or regulatory reporting requirement). Rather, the requirement to report only applies to employees who choose to establish an LEF pursuant to these regulations.

In proposed § 2635.1007, OGE also recognizes the need for penalties for noncompliance with the standards set forth in the proposed regulation. If an LEF receives an impermissible contribution, that contribution must be returned to the donor as soon as practicable but no later than the next reporting due date. If a report is filed after a due date, the employee may not accept contributions or distributions until the report is filed. Additionally, OGE will retain the authority to indefinitely prohibit employees from accepting contributions or distributions from an LEF if there is continuing or significant noncompliance.

Proposed § 2635.1008: Termination of a Legal Expense Fund

Proposed § 2635.1008 sets out the reasons an employee beneficiary may terminate an LEF and provides requirements for distributing excess funds. OGE received comments

suggesting that unused funds should be returned to the donors on a *pro rata* basis or donated to a 501(c)(3) organization upon termination of an LEF, consistent with the House and Senate rules. Because of the difficulties inherent in returning funds to donors (i.e., locating donors and ensuring timely return of funds), proposed § 2635.1008 requires a trustee to distribute excess funds to a 501(c)(3) organization within 90 days of termination. The organization must not be one that is established by the employee beneficiary, nor an organization with which the employee has a covered relationship within the meaning of § 2635.502(b)(1), nor can the beneficiary or the beneficiary's spouse or child be an officer, director, or employee of the organization. Additionally, the proposed regulation requires a trust termination report that serves as a final quarterly report and indicates the organization to which the excess funds were donated. OGE requests comment on whether the 501(c)(3) should or should not be named at the formation of the trust, or whether the selection of the 501(c)(3) should be left to the discretion of the trustee.

Proposed § 2635.1009: Pro Bono Legal Services

Proposed § 2635.1009 addresses employees' acceptance of *pro bono* legal services. Most commenters were in favor of permitting acceptance of appropriate *pro bono* legal services by employees, with sufficient limitations. Moreover, several commenters identified problems inherent in overly restricting acceptance of *pro bono* services, including potential interference in attorney/client relationships and curtailing access to needed legal assistance for government employees. Accordingly, OGE has proposed rules specifically governing the acceptance of *pro bono* legal services, including *pro bono* services from public interest organizations. Proposed § 2635.1009 would prohibit employees from accepting *pro bono* services from lobbyists, foreign governments or agents, or persons substantially affected by the performance or nonperformance of the employees' duties. The proposed rule otherwise permits employees to accept *pro bono* services in connection with covered legal matters. Additionally, OGE's rule as drafted allows employees to accept *pro bono* services directly from entities providing the legal services (such as law firms or nonprofits). However, OGE is soliciting comments on whether employees may accept legal services at a reduced cost or

free of charge when the legal services are paid for by a nonprofit organization, such as a 501(c)(3) or 501(c)(4), but the services are provided by attorneys outside of that organization.

B. Regulatory Amendments to Subpart B of the Standards

OGE is proposing to make related amendments to the portions of the Standards that govern the solicitation and acceptance of gifts from outside sources, subpart B. Specifically, OGE is proposing a new exception for certain legal expense payments and *pro bono* legal services provided in accordance with proposed subpart J. OGE is also proposing to revise § 2635.204(c) of the gift rules to clarify that an established employee organization may provide legal services pursuant to this section.

Proposed § 2635.204(n): Exception for Legal Expense Funds and Pro Bono Legal Services

OGE is proposing a new exception to the gift rules for legal expense payments or services for covered legal matters, so long as the payments or services are provided in accordance with proposed subpart J. However, regardless of whether an employee's legal expense payments or services for covered legal matters are from a prohibited source or given because of official position, that employee will still be subject to the requirements and safeguards established in subpart J.

Proposed § 2635.204(c): Discounts and Similar Benefits

OGE proposes revising § 2635.204(c) of the gift rules to clarify that an established employee organization may pay legal expenses pursuant to this section. The question of whether employees may accept free or discounted legal services through established employee organizations, such as unions or employee welfare organizations, arose during this regulatory process. OGE is aware that agencies have used § 2635.204(c)(2)(ii) to accept gifts of services (e.g., financial counseling, visiting nurses) from employee benefit organizations. However, the language of this exception as currently written is ambiguous.

Accordingly, OGE proposes language under new § 2635.204(c)(2)(iv) to clarify that employees may properly accept opportunities and benefits (including, but not limited to, legal services) offered by an established employee organization, when eligibility is based on the employee's status as an agency employee. OGE added a new § 2635.204(c)(2) exception rather than amend existing § 2635.204(c)(2)(ii)

because OGE did not want to confuse the intended purposes of the separate exceptions or link employee acceptance of benefits from employee organizations to similar benefits offered to the general public by outside groups. The proposed new exception is limited to "established" employee organizations, such as employee welfare groups for Federal employees, because the purpose of this exception is to allow employees to accept opportunities and benefits from pre-existing employee organizations with a general mission of providing assistance to agency employees, rather than from organizations established as a response to a specific investigation or established to help a specific employee. An employee organization need not be established before this regulation going into effect; rather, the organization should be established before a legal matter arises.

C. Regulatory Amendments to Confidential Financial Disclosure Reporting Requirements

OGE is proposing to revise § 2634.907(g)(5) of part 2634 to remove the requirement that anonymous whistleblowers who happen to be confidential financial disclosure report filers report gifts for payment of legal expenses related to the whistleblowing activity. Confidential financial disclosure reports are always reviewed by the ethics office of a filer's agency and are often reviewed by the filer's supervisor. The disclosure of the payment of legal expenses as gifts may reveal the whistleblower, which would undermine the protections that whistleblowers are provided under the various whistleblower protection statutes. See 5 U.S.C. 2302(b)(8), (b)(9)(C); see also 5 U.S.C. app. II, 8H; 50 U.S.C. 3033, 3517; 28 CFR 27.1. OGE believes the possible harm to an anonymous whistleblower outweighs the value of disclosing the information, particularly given requirements in proposed subpart J. In addition, during OGE's information gathering process several public interest groups expressed support for maintaining the anonymity of whistleblowers. At this time, OGE is unable to propose a similar exception for public financial disclosure filers because there is no such exception in the Ethics in Government Act, 5 U.S.C. app. 102(a)(2).

III. Matters of Regulatory Procedure

Regulatory Flexibility Act

As Director of the Office of Government Ethics, I certify under the Regulatory Flexibility Act (5 U.S.C.

chapter 6) that this proposed rule will not have a significant economic impact on a substantial number of small entities because it primarily affects current Federal executive branch employees.

Paperwork Reduction Act

The Paperwork Reduction Act (44 U.S.C. chapter 35) applies because this regulation creates information collection requirements that require approval of the Office of Management and Budget. The information collection requirements imposed by the proposed regulation are directed at beneficiaries of legal expense funds, who are current executive branch employees. OGE notes that an employee beneficiary who is leaving executive branch employment is required to file an employment termination report no later than their last day of employment. At the same time, a 30-day filing extension may be granted for good cause shown. Although it is possible that a beneficiary may file a termination report after leaving government service after having received an extension, the information collection requirement is directed toward current employees. OGE also notes that there are no independent information collection requirements on trustees.

In fulfilling the regulatory requirements, employee beneficiaries must in turn collect information from (1) donors who contribute to the legal expense fund for the payment of legal expenses and (2) payees who receive payments distributed from the legal expense fund. Together, this information collection is titled “OGE Legal Expense Fund Information Collection.”

OGE plans to seek Paperwork Reduction Act approval of this new information collection. The purposes of the OGE Legal Expense Fund Information Collection include, but are not limited to, obtaining information relevant to a conflict-of-interest determination, and disclosing on the OGE website information submitted pursuant to 5 CFR part 2635, subpart J. The authority for this information collection is addressed in the Supplementary Information section.

OGE estimates that there will be approximately 110 Respondents annually. It is anticipated that there may be an average of five legal expense fund trusts in existence each year. Each trust is anticipated to have approximately 20 donors, whose reporting requirements are tied to the frequency with which they donate, and approximately two payees, who will submit information each time they receive a distribution.

OGE estimates that the total annual burden will be approximately 9 to 10

hours. OGE estimates the estimated time per response to be an average of 5 minutes, with respect to each donor or payee communication to an employee beneficiary.

These estimates are based in part on OGE’s knowledge of several legal expense funds that have been established for Executive branch employees, as well as OGE’s consultation with the U.S. House of Representatives and the U.S. Senate regarding the legal expense funds that they oversee.

Request for Comments

Agency and public comment is invited specifically on the need for and practical utility of this information collection, the accuracy of OGE’s burden estimate, the enhancement of quality, utility, and clarity of the information collected, and the minimization of burden (including the use of information technology). OGE is currently exploring methods for collecting this information, and is seeking public comment. Potential methods may include, for example, the use of standard forms.

Unfunded Mandates Reform Act

For purposes of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. chapter 5, subchapter II), this proposed rule will not significantly or uniquely affect small governments and will not result in increased expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more (as adjusted for inflation) in any one year.

Executive Order 13563 and Executive Order 12866

Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select the regulatory approaches that maximize net benefits (including economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This proposed rule has been designated as a “significant regulatory action” although not economically significant, under section 3(f) of Executive Order 12866. Accordingly, this rule has been reviewed by the Office of Management and Budget.

Currently, executive branch employees may accept gifts to pay for legal expenses from others directly and can also establish funds to accept

donations for such expenses, as long as the employee remains in compliance with the gift restrictions in subparts B and C of the Standards of Conduct and the criminal conflict of interest statutes. *See, e.g.*, OGE Legal Advisory LA–18–11 (Sept. 12, 2018); OGE Legal Advisory LA–17–10 (Sept. 28, 2017). In other words, there are currently costs for employees who establish an LEF in order to ensure compliance with ethics rules even in the absence of OGE’s new proposed framework in subpart J, but compliance can be difficult and confusing as the current rules do not address these types of gifts specifically. OGE’s role is currently limited to providing an LEF trust template or to providing technical assistance to help ensure that executive branch employees who may receive distributions from an LEF will be in compliance with existing ethics laws and rules.

Based on OGE’s current experience under the status quo, it is estimated that approximately five executive branch employees may seek to establish or maintain an LEF annually. The proposed new framework will consist of the following activities: Establishment of the LEF trust; submission of trust documentation for agency review and approval; review and approval by OGE (where applicable); LEF trustee soliciting and accepting donations; LEF trustee screening donations to ensure the donor is permissible; LEF trustee overseeing distributions from the trust for the employee’s legal expenses; preparing quarterly reports of contributions to and distributions from the LEF; submission of quarterly reports for agency review; review by OGE (where applicable); preparation of trust termination reports and/or employment termination reports; submission of those reports for agency review and OGE review (where applicable); and communications regarding all of the above. OGE estimates that the annual time burden for all of the above is 100 hours. Using an estimated rate \$325 per hour for the services of a professional trust administrator or private representative, the estimated annual cost burden is \$32,500. *See* Clio, Legal Trends Report 55 (2019), <https://www.clio.com/resources/legal-trends/2019-report/> (calculating an average hourly rate of \$319 for trust lawyers nationally). However, OGE estimates that the annual time burden under the status quo, if an employee establishes a legal expense fund that needs to comply with existing ethics rules, is 75 hours with an annual cost burden of \$24,375. Thus, the net increase from the status quo is approximately \$8,125 per fund.

The estimate of 75 hours is based, in part, on the estimated time burden for OGE's qualified trust program. *See* 84 FR 67743. That number was reduced because the status quo does not require review and approval of trusts or submission of reports to agencies and OGE. Under the status quo, a significant time burden does exist because the lack of a detailed framework requires additional research by employee representatives, consultation with agency ethics officials and OGE, and a more detailed review of each LEF donor in the absence of an enumerated list of permissible donors. The additional 25-hour estimate is based on the specific submissions required by proposed 5 CFR part 2635, subpart J. Specifically, submission of LEF trust fund establishing documents, quarterly reports, and termination reports; review by agencies and OGE of those submissions; and corresponding communications will increase the cost burden in comparison to the status quo. The burden on LEF donors specifically is unchanged because they would need to provide the same level of information under the status quo.

The benefits from implementing this new regulatory structure are significant. Employees' acceptance of payments for legal expenses relating to their official duties has triggered concerns from outside groups, Congress, and the media, in terms of appearance of corruption/corruption issues and a desire for transparency. Creating this regulation will provide a framework for screening for conflicts of interest and transparency, which will serve to protect both the agency and the employee. Further, the regulation will provide clarity to executive branch employees by articulating the process for establishing an LEF and the requirements in maintaining one, including: Defining prohibited donors, donation caps, review and approval of trust fund documents, and the submission of quarterly, publicly available reports. As a result of these requirements, as well as the increased public reporting requirements, the public will have increased confidence in the decision making of executive branch employees who accept gifts of legal expenses consistent with the new proposed subpart J.

Executive Order 12988

As Director of the Office of Government Ethics, I have reviewed this proposed rule in light of section 3 of Executive Order 12988, Civil Justice Reform, and certify that it meets the applicable standards provided therein.

Executive Order 13175

The Office of Government Ethics has evaluated this proposed rule under the criteria set forth in Executive Order 13175 and determined that tribal consultation is not required as this proposed rule has no substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

List of Subjects

5 CFR Part 2634

Certificates of divestiture, Conflict of interests, Financial disclosure, Government employees, Penalties, Privacy, Reporting and recordkeeping requirements, Trusts and trustees.

5 CFR Part 2635

Conflict of interests, Executive branch standards of ethical conduct, Government employees.

Approved: April 12, 2022.

Emory Rounds,

Director, U.S. Office of Government Ethics.

For the reasons set forth in the preamble, the U.S. Office of Government Ethics proposes to amend 5 CFR parts 2634 and 2635 as follows:

PART 2634—EXECUTIVE BRANCH FINANCIAL DISCLOSURE, QUALIFIED TRUSTS, AND CERTIFICATES OF DIVESTITURE

- 1. The authority citation for part 2634 continues to read as follows:

Authority: 5 U.S.C. app.; 26 U.S.C. 1043; Pub. L. 101–410, 104 Stat. 890, 28 U.S.C. 2461 note, as amended by Sec. 31001, Pub. L. 104–134, 110 Stat. 1321 and Sec. 701, Pub. L. 114–74; Pub. L. 112–105, 126 Stat. 291; E.O. 12674, 54 FR 15159, 3 CFR, 1989 Comp., p. 215, as modified by E.O. 12731, 55 FR 42547, 3 CFR, 1990 Comp., p. 306.

- 2. Amend § 2634.907 by:

- a. Revising paragraph (g)(5); and
- b. Designating the example following paragraph (g)(5) as Example 1 to paragraph (g).

The revision reads as follows:

§ 2634.907 Report contents.

* * * * *

(g) * * *

(5) *Exceptions.* Reports need not contain any information about:

(i) Gifts and travel reimbursements received from relatives (see § 2634.105(o)).

(ii) Gifts and travel reimbursements received during a period in which the filer was not an officer or employee of the Federal Government.

(iii) Any food, lodging, or entertainment received as “personal hospitality of any individual,” as defined in § 2634.105(k).

(iv) Any payments for legal expenses from a legal expense fund or the provision of *pro bono* legal services, as defined in subpart J of part 2635 of this chapter, or any payments for legal expenses or the provision of *pro bono* legal services that otherwise qualify for a gift exclusion or gift exception in subpart B of part 2635 of this chapter, if the confidential filer is an anonymous whistleblower as defined by § 2635.1003 of this chapter.

(v) Any exclusions specified in the definitions of “gift” and “reimbursement” at § 2634.105(h) and (n).

* * * * *

PART 2635—STANDARDS OF ETHICAL CONDUCT FOR EMPLOYEES OF THE EXECUTIVE BRANCH

- 3. The authority citation for part 2635 continues to read as follows:

Authority: 5 U.S.C. 7301, 7351, 7353; 5 U.S.C. App. (Ethics in Government Act of 1978); E.O. 12674, 54 FR 15159, 3 CFR, 1989 Comp., p. 215, as modified by E.O. 12731, 55 FR 42547, 3 CFR, 1990 Comp., p. 306.

- 4. Amend § 2635.203 by adding paragraphs (h) and (i) to read as follows:

§ 2635.203 Definitions.

* * * * *

(h) *Legal expense fund* has the meaning set forth in § 2635.1003.

(i) *Pro bono legal services* has the meaning set forth in § 2635.1003.

- 5. Amend § 2635.204 by:

- a. Removing the word “or” at the end of paragraph (c)(2)(ii);
- b. Removing the period at the end of paragraph (c)(2)(iii) and adding “; or” in its place; and
- c. Adding paragraph (c)(2)(iv), example 4 to paragraph (c)(2), and paragraph (n).

The additions read as follows:

§ 2635.204 Exceptions to the prohibition for acceptance of certain gifts.

* * * * *

(c) * * *

(2) * * *

(iv) Offered to employees by an established employee organization, such as an employee welfare group for Federal employees, because of the employees' Government employment, so long as the employee is part of the class of individuals eligible for assistance from the employee organization as set forth in the organization's governing documents.

* * * * *

Example 4 to paragraph (c)(2): A military relief society provides access to financial counseling services, loans, and grants to all sailors and Marines. Service members may accept such benefits because the services are offered by an employee organization that was established before the matter arose and in which membership is because of the employees' Government employment.

* * * * *

(n) *Legal expense funds and pro bono legal services.* An employee who seeks legal representation for a matter arising in connection with the employee's official position, the employee's prior position on a campaign of a candidate for President or Vice President, or the employee's prior position on a Presidential Transition Team may accept:

(1) Payments for legal expenses paid out of a legal expense fund that is established and operated in accordance with subpart J of this part; and

(2) *Pro bono* legal services provided in accordance with subpart J of this part.

■ 6. Add subpart J to read as follows:

Subpart J—Legal Expense Funds

Sec.	
2635.1001	Overview.
2635.1002	Applicability and related considerations.
2635.1003	Definitions.
2635.1004	Establishment.
2635.1005	Administration.
2635.1006	Contributions and use of funds.
2635.1007	Reporting requirements.
2635.1008	Termination of a legal expense fund.
2635.1009	<i>Pro bono</i> legal services.

§ 2635.1001 Overview.

This subpart contains standards for an employee's acceptance of payments for legal expenses through a legal expense fund and an employee's acceptance of *pro bono* legal services. Legal expenses covered by this subpart are those for a matter arising in connection with the employee's past or current official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team.

§ 2635.1002 Applicability and related considerations.

(a) *Applicability.* This subpart applies to an employee who seeks to accept payments for legal expenses from a legal expense fund or the provision of *pro bono* legal services. The legal expenses or the provision of *pro bono* legal services must be for a matter arising in connection with the employee's past or current official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team.

(b) *Not covered by this subpart.* The following types of payments for legal expenses or *pro bono* legal services are not covered by this subpart:

(1) *Personal matters.* Payments for legal expenses or the provision of *pro bono* legal services related to matters that do not arise in connection with the employee's past or current official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team, such as a matter that is primarily personal in nature, are not covered by this subpart. Personal matters include, but are not limited to, tax planning, personal injury litigation, protection of property rights, family law matters, and estate planning or probate matters.

Example 1 to paragraph (b)(1): A Department of Homeland Security employee wants to set up a legal expense fund in connection with the employee's divorce and custody proceeding. This is a personal matter and the employee may not establish a legal expense fund under this subpart, but may use other gift exceptions and exclusions in accordance with subparts B and C of this part as appropriate.

(2) *Gifts acceptable according to a gift exclusion or exception.* Payments for legal expenses or the provision of *pro bono* legal services that otherwise qualify for a gift exclusion or exception other than § 2635.204(n) are not covered by this subpart.

Example 1 to paragraph (b)(2): A Central Intelligence Agency employee is facing administrative disciplinary action due to an issue with the employee's security clearance and would like to seek financial assistance to pay for an attorney. Even though this matter arose in connection with their official position, if the employee's parents offer to cover the legal expenses, that donation is not subject to this subpart, as it would be subject to the gift exception at § 2635.204(b).

Note 1 to paragraph (b): Acceptance of legal expense payments or *pro bono* legal services not covered by this subpart must be analyzed under subpart B of this part.

(c) *Related considerations—(1) Gifts between employees.* Acceptance of legal expense payments or the provision of *pro bono* legal services from another employee must be analyzed under 18 U.S.C. 205 and subpart C of this part.

(2) *Impartiality.* An employee beneficiary will be treated as having a covered relationship for one year within the meaning of § 2635.502(b)(1) with a legal expense fund's trustee and donors, as well as any *pro bono* legal services providers. The one-year period of disqualification for each donor begins to

run on the most recent date the legal expense fund donation is received from that donor or, in the case of *pro bono* services, the last date *pro bono* services were provided. The employee beneficiary must take appropriate steps to avoid an appearance of loss of impartiality in the performance of their official duties in accordance with § 2635.502.

Example 1 to paragraph (c)(2): A donor contributed to a Social Security Administration (SSA) employee's legal expense fund. Three months after this contribution was made, the donor submitted a disability claim. Under the circumstances, the SSA employee would be correct in concluding that a reasonable person would be likely to question the employee's impartiality if the employee were to participate in evaluating that disability claim.

(3) *Misuse of position.* Legal expense fund payments must be solicited and accepted consistent with the provisions in subpart G of this part relating to the use of public office for private gain, use of nonpublic information, use of Government property, and use of Government time.

Example 1 to paragraph (c)(3): A Transportation Security Administration (TSA) employee retains legal counsel due to an investigation into inappropriate behavior in their department, and the employee establishes a legal expense fund in accordance with this subpart. Neither the employee nor the legal expense fund's trustee may use the TSA agency seal in materials to imply the Government endorses the legal expense fund, or use nonpublic details of the investigation to solicit contributions to the legal expense fund. Further, the employee may not task subordinates with any work relating to administration of the legal expense fund.

(4) *Financial disclosure.* In addition to the legal expense fund reporting requirements outlined in § 2635.1007, an employee beneficiary who is a public or confidential filer, other than a confidential filer who is an anonymous whistleblower, under part 2634 of this chapter must report gifts of legal expense payments accepted from sources other than the United States Government, including gifts of *pro bono* services, on the employee's financial disclosure report, subject to applicable thresholds and exclusions.

§ 2635.1003 Definitions.

For purposes of this subpart:

Anonymous whistleblower means an employee who makes or believes to be making a protected report or disclosure under 5 U.S.C. 2302(b)(8), 5 U.S.C.

2302(b)(9)(C), 5 U.S.C. app. II, 8H, 50 U.S.C. 3517, 50 U.S.C. 3033, or 28 CFR 27.1, and who seeks to remain anonymous.

Arising in connection with the employee's past or current official position means the employee's involvement in the legal matter would not have arisen had the employee not held the status, authority, or duties associated with the employee's past or current Federal position.

Example 1 to this definition of "arising in connection with the employee's past or current official position": A Department of Transportation employee is being investigated by the Inspector General for potential misuse of Government resources while on official travel. The Internal Revenue Service (IRS) is separately investigating the employee for misreporting household income on the employee's personal taxes. The employee may use this subpart to establish a legal expense fund concerning the Inspector General investigation because the legal matter arose in connection with their official position. However, this subpart would not apply to the unrelated IRS investigation because that legal matter did not arise in connection with the employee's official position.

Example 2 to this definition of "arising in connection with the employee's past or current official position": A senior military officer faces court-martial charges for sexual harassment of a junior officer. All of the charged misconduct occurred outside official duty hours. Because the officer would not be subject to the Uniform Code of Military Justice had the officer not held their official position, the officer may establish a legal expense fund in accordance with this subpart.

Arising in connection with the employee's prior position on a campaign means the employee's involvement in the legal matter would not have arisen had the employee not held the status, authority, or duties associated with the employee's prior position on a campaign of a candidate for President or Vice President.

Arising in connection with the employee's prior position on a Presidential Transition Team means the employee's involvement in the legal matter would not have arisen had the employee not held the status, authority, or duties associated with the employee's prior position as a member of the staff of a Presidential Transition Team.

Employee beneficiary means an employee as defined by § 2635.102(h) for whose benefit a legal expense fund is established under this subpart.

Legal expense fund means a fund established to receive contributions and to make distributions of legal expense payments.

Legal expense payment or payment for legal expenses means anything of value received by an employee under circumstances that make it clear that the payment is intended to defray costs associated with representation in a legal, congressional, or administrative proceeding.

Pro bono legal services means legal services provided without charge to the employee beneficiary or for less than market value as defined in § 2635.203(c) to an employee who seeks legal representation for a matter arising in connection with the employee's official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team.

§ 2635.1004 Establishment.

(a) *Structure.* A legal expense fund must be established as a trust that conforms with the requirements of this part and applicable state law. To the extent the requirements of this part and applicable state law are incompatible, the Director of the Office of Government Ethics may permit such deviations from this part as necessary to ensure compatibility with applicable state law.

(b) *Grantor.* The legal expense fund must be established by the employee beneficiary.

(c) *Trustee.* A legal expense fund must be administered by a trustee who is not:

(1) The employee beneficiary;

(2) A spouse, parent, or child of the employee beneficiary;

(3) Any other employee of the Federal executive, legislative, or judicial branches;

(4) An agent of a foreign government as defined in 5 U.S.C. 7342(a)(2);

(5) A lobbyist as defined by 2 U.S.C. 1602(10) who is currently registered pursuant to 2 U.S.C. 1603(a); or

(6) A person who has interests that may be substantially affected by the performance or nonperformance of the employee beneficiary's official duties.

(d) *Employee beneficiary.* (1) Except as provided in paragraph (d)(2) of this section, a legal expense fund must be established for the benefit of a single, named employee beneficiary.

(2) A legal expense fund for the benefit of an anonymous whistleblower may be established without disclosing the identity of the anonymous whistleblower to anyone other than the trustee.

(e) *Filing and approval of legal expense fund trust document.* An employee beneficiary may not solicit or

accept contributions or distributions through a legal expense fund before:

(1) Filing the legal expense fund document in accordance with paragraph (f) of this section; and

(2) Receiving approval for the legal expense fund in accordance with paragraph (g)(1) of this section.

(f) *Filing of legal expense fund trust document.* (1) The employee beneficiary, or the trustee or representative of the employee beneficiary, must file the legal expense fund trust document with the designated agency ethics official at the agency where the employee beneficiary is employed.

(2) An employee beneficiary who is an anonymous whistleblower may choose to file a legal expense fund trust document anonymously through the employee beneficiary's trustee or representative with the Office of Government Ethics only. If the Office of Government Ethics receives a legal expense fund trust document from a covert employee of the Intelligence Community, the Office of Government Ethics will handle the document as classified, according to procedures agreed upon with the employee's agency.

(g) *Approval of legal expense fund trust document—(1) Designated agency ethics official approval.* The designated agency ethics official must determine, based on the submitted trust document and information regarding the trustee, whether to approve a legal expense fund trust document filed by an employee beneficiary, other than an anonymous whistleblower choosing to file with the Office of Government Ethics, within 30 calendar days of filing.

(i) *Standard for approval.* The designated agency ethics official must approve a legal expense fund that is, based on the submitted trust document and information regarding the trustee, in compliance with this subpart.

(ii) *Transmission of trust documents to the Office of Government Ethics.* Following approval, the signed legal expense fund trust document must be forwarded to the Office of Government Ethics within seven calendar days.

(iii) *Exception for anonymous whistleblowers.* The Office of Government Ethics will serve as the approving authority for anonymous whistleblowers who choose to file a legal expense fund trust document anonymously with the Office of Government Ethics only.

(2) *Office of Government Ethics review.* Following approval by the designated agency ethics official, the Office of Government Ethics will conduct a second review of the legal

expense fund trust documents of the employee beneficiaries listed in paragraph (g)(2)(ii) of this section within 30 calendar days of receipt.

(i) *Standard for review.* The Office of Government Ethics will review the legal expense fund trust document to determine whether it conforms with the requirements established by this subpart. If defects are ascertained, the Office of Government Ethics will bring them to the attention of the approving agency and the employee beneficiary or the employee beneficiary's trustee or representative, who will have 30 calendar days to take necessary corrective action.

(ii) *Employee beneficiaries requiring secondary Office of Government Ethics review.* The Office of Government Ethics will review the legal expense fund trust documents of the following employee beneficiaries:

- (A) The Postmaster General;
- (B) The Deputy Postmaster General;
- (C) The Governors of the Board of Governors of the United States Postal Service;
- (D) A designated agency ethics official;
- (E) Employees of the White House Office and the Office of the Vice President; and

(F) Officers and employees in offices and positions which require confirmation by the Senate, other than members of the uniformed services and Foreign Service Officers below the rank of Ambassador.

(3) *Right to Appeal.* If the approval of a legal expense fund has been denied, the requester may appeal the denial within 60 days by mail or email to the Director of the U.S. Office of Government Ethics. Requests sent by mail should be addressed to 1201 New York Avenue NW, Suite 500, Washington, DC 20005–3917. The envelope containing the request and the letter itself should both clearly indicate that the subject is a legal expense fund appeal. Email requests should be sent to usoge@oge.gov and should indicate in the subject line that the message contains a legal expense fund appeal.

(h) *Amendments.* The trust document may only be amended if the trustee and employee beneficiary file the amended legal expense fund trust document in accordance with paragraph (f) of this section and seek approval in accordance with paragraph (g) of this section.

(i) *One legal expense fund.* No employee beneficiary may establish or maintain more than one legal expense fund at any one time. An employee may not later establish a second legal expense fund for the same legal matter.

(j) *Conforming existing legal expense funds.* In order for employee beneficiaries who have existing legal expense funds to receive legal expense payments from the existing legal expense fund, the employee beneficiary must comply with §§ 2635.1005(b), 2635.1006, and 2635.1007 by [90 calendar days after the effective date of the final rule].

(k) *Public access.* Approved legal expense fund trust documents will be made available by the Office of Government Ethics to the public on its website within 30 calendar days of receipt. The trust fund documents will be sortable by employee beneficiary's name, agency, and position, as well as type of document and document date. Legal expense fund trust documents filed by anonymous whistleblowers will not be made available to the public. Legal expense fund trust documents that are made available to the public will not include any information that would identify individuals whose names or identities are otherwise protected from public disclosure by law.

§ 2635.1005 Administration.

(a) *Trustee's duties and powers.* A trustee of a legal expense fund is responsible for:

(1) Operating the legal expense fund trust consistent with this part and applicable state law;

(2) Operating as a fiduciary for the employee beneficiary in relation to the legal expense fund property and the legal expense fund purpose;

(3) Providing information to the employee beneficiary as necessary to comply with the Ethics in Government Act, 5 U.S.C. app. 102(a)(2), part 2634 of this chapter, and this part; and

(4) Notifying donors and payees that their names will be disclosed on the OGE website.

(b) *Limitation on role of employee beneficiary.* An employee beneficiary may not exercise control over the legal expense fund property.

§ 2635.1006 Contributions and use of funds.

(a) *Contributions.* A legal expense fund may only accept contributions of payments for legal expenses from permissible donors listed in paragraph (b) of this section.

(b) *Permissible donors.* A permissible donor includes:

- (1) An individual who is not:
 - (i) An agent of a foreign government as defined in 5 U.S.C. 7342(a)(2);
 - (ii) A lobbyist as defined by 2 U.S.C. 1602(10) who is currently registered pursuant to 2 U.S.C. 1603(a);

(iii) Acting on behalf of, or at the direction of, another individual or entity in making a donation;

(iv) Donating anonymously;

(v) Seeking official action by the employee beneficiary's agency;

(vi) Doing business or seeking to do business with the employee beneficiary's agency;

(vii) Conducting activities regulated by the employee beneficiary's agency other than regulations or actions affecting the interests of a large and diverse group of persons;

Example 1 to paragraph (b)(1)(vii): A donor contributed to a Department of State employee's legal expense fund. The donor has recently applied to renew their United States Passport. Because the Department of State's passport renewal office affects the interests of a large and diverse group of people, the donation is permissible under paragraph (b)(1)(vii) of this section.

(viii) Substantially affected by the performance or nonperformance of the employee beneficiary's official duties; or

(ix) An officer or director of an entity that is substantially affected by the performance or nonperformance of the employee beneficiary's official duties.

(2) A national committee of a political party as defined by 52 U.S.C. 30101(14), (16) or, for former members of a campaign of a candidate for President or Vice President, the campaign, provided that the donation is not otherwise prohibited by law and the entity is not substantially affected by the performance or nonperformance of an employee beneficiary's official duties.

Note 1 to paragraph (b): Acceptance of a legal expense payment from another employee must be analyzed under subpart C of this part.

(c) *Contribution limits.* A legal expense fund may not accept more than \$10,000 from any single permissible donor per calendar year of the fund.

Note 2 to paragraph (c): As discussed in § 2635.1002(b)(2), payments for legal expenses or the provision of *pro bono* legal services that otherwise qualify for a gift exclusion or exception other than § 2635.204(n) in subpart B of this part are not covered by this subpart.

(d) *Use of funds.* Legal expense fund payments must be used only for the following purposes:

(1) An employee beneficiary's legal expenses related to those legal proceedings arising in connection with the employee's past or current official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team;

(2) Expenses incurred in soliciting for and administering the fund; and

(3) Expenses for the discharge of Federal, state, and local tax liabilities that are incurred as a result of the creation, operation, or administration of the fund.

Example 1 to paragraph (d): An employee beneficiary's attorney determines it is necessary to employ an expert witness related to a legal proceeding arising in connection with the employee beneficiary's official position. Funds may be distributed from the legal expense fund to pay fees and expenses for the expert witness.

§ 2635.1007 Reporting requirements.

(a) *Quarterly reports.* An employee beneficiary must file quarterly reports that include the following information until the trust is terminated or an employment termination report is filed as set forth in paragraph (d) of this section.

(1) *Contributions.* An employee beneficiary must report the donor's name, employer, date(s) of contribution, and amount for each donor that makes a contribution exceeding \$250 during the quarterly reporting period. For the report due January 30, an employee beneficiary must also disclose contributions from a single donor that exceed \$250 for the prior calendar year unless the contributions have been disclosed on a prior quarterly report.

(2) *Distributions.* An employee beneficiary must report the payee's name, date(s) of distribution, amount, and purpose of any distribution from the legal expense fund exceeding \$250 during the quarterly reporting period. For the report due January 30, an employee beneficiary must also disclose distributions to a single source that exceed \$250 for the prior calendar year unless the distributions have been disclosed on a prior quarterly report.

(b) *Filing of reports.* (1) The employee beneficiary must file all reports required in this section with the designated agency ethics official at the agency where the employee beneficiary is employed. The trustee or a representative of the employee beneficiary may file a report on behalf of the employee beneficiary.

(2) An employee beneficiary who is an anonymous whistleblower may choose to file reports anonymously through the employee beneficiary's trustee or representative with the Office of Government Ethics. If the Office of Government Ethics receives a quarterly report from a covert employee of the Intelligence Community, the Office of Government Ethics must handle the document as classified, according to procedures agreed upon with the employee's agency.

(c) *Reporting periods and due dates.* Quarterly reports must cover the reporting periods and comply with the following due dates:

(1) January 1 to March 31, with the report due on April 30.

(2) April 1 to June 30, with the report due on July 30.

(3) July 1 to September 30, with the report due on October 30.

(4) October 1 to December 31, with the report due on January 30 of the following year.

(5) If the scheduled due date falls on a Saturday, Sunday or Federal Holiday, the report will instead be due the next business day.

(d) *Employment termination report.* If the employee beneficiary is leaving executive branch employment, the employee beneficiary must file an employment termination report no later than their last day of employment. No contributions may be accepted for or distributions paid by the legal expense fund between the date of the filing and the employee beneficiary's termination date. The report must include the following:

(1) A report of contributions received and distributions made as required by paragraph (a) of this section between the end of the last quarterly reporting period and the date of the report; and

(2) A statement as to whether the trust will be terminated or remain in force after the employee beneficiary terminates their executive branch employment.

(e) *Extensions.* For each quarterly or employment termination report, a single extension of 30 calendar days may be granted by the Director of the Office of Government Ethics, or the employee beneficiary's designated agency ethics official if filing with agency, for good cause upon written request by the employee beneficiary or the trustee.

(f) *Review of reports—(1) Designated agency ethics official review.* The designated agency ethics official must review reports within 30 calendar days of filing.

(i) *Standard for review.* The designated agency ethics official will review the report to determine that:

(A) The information required under paragraph (a) of this section is reported for each contribution and distribution; and

(B) Contributions to and distributions from the trust are in compliance with § 2635.1006.

(ii) *Transmission of reports to the Office of Government Ethics.* Following review, all reports must be forwarded in unclassified format to the Office of Government Ethics within seven calendar days.

(iii) *Office of Government Ethics review for anonymous whistleblowers.*

The Office of Government Ethics will serve as the reviewing authority for anonymous whistleblowers who choose to file reports anonymously with the Office of Government Ethics only.

(2) *Office of Government Ethics review.* Following review by the designated agency ethics official, the Office of Government Ethics will conduct a second review of the reports of the employee beneficiaries listed in paragraph (f)(2)(ii) of this section within 30 calendar days of the receipt.

(i) *Standard for review.* The Office of Government Ethics will review the report to determine whether it conforms with the requirements established by this subpart. If defects are ascertained, the Office of Government Ethics will bring them to the attention of the reviewing agency and the employee beneficiary or the employee beneficiary's trustee or representative, who will have 30 calendar days to take necessary corrective action.

(ii) *Employee beneficiaries requiring secondary Office of Government Ethics review.* The Office of Government Ethics will review the reports of the following employee beneficiaries:

(A) The Postmaster General;

(B) The Deputy Postmaster General;

(C) The Governors of the Board of Governors of the United States Postal Service;

(D) A designated agency ethics official;

(E) Employees of the White House Office and the Office of the Vice President; and

(F) Officers and employees in offices and positions which require confirmation by the Senate, other than members of the uniformed services and Foreign Service Officers below the rank of Ambassador.

(g) *Public access.* Quarterly and employment termination reports will be made available by the Office of Government Ethics to the public on its website within 30 calendar days of receipt. The reports will be sortable by employee beneficiary's name, agency, and position, as well as type of document and document date. Quarterly and employment termination reports that are made available to the public by the Office of Government Ethics will not include any information that would identify individuals whose names or identities are otherwise protected from public disclosure by law. The reports filed by anonymous whistleblowers will not be made available to the public.

(h) *Noncompliance—(1) Receipt of impermissible contributions.* If the legal expense fund receives a contribution

that is not permissible under § 2635.1006, the contribution must be returned to the donor as soon as practicable but no later than the next reporting due date as described in paragraph (c) of this section.

(2) *Late filing of required documents and reports.* If a report is filed after the due date, the employee beneficiary forfeits the ability to accept contributions or distributions through the trust until the report is filed.

Example 1 to paragraph (h)(2): A Department of Labor employee establishes a legal expense fund in accordance with this subpart. Because the employee filed the trust document on February 15, the first quarterly report is due on April 30. However, the employee did not submit the first quarterly report until May 15. The employee is prohibited from accepting contributions or distributions through the trust from May 1 until May 15. Once the employee files the quarterly report, the employee may resume accepting contributions and distributions.

(3) *Continuing or other significant noncompliance.* In addition to the remedies in paragraphs (h)(1) and (2) of this section, the Office of Government Ethics has the authority to determine that an employee beneficiary may not accept contributions and distributions through the trust if there is continuing or other significant noncompliance with this subpart.

§ 2635.1008 Termination of a legal expense fund.

(a) *Cause.* A legal expense fund may only be terminated for the following reasons:

(1) The purpose of the trust is fulfilled or no longer exists; or

(2) At the direction of the employee beneficiary.

(b) *Excess funds.* Within 90 calendar days of termination of the legal expense fund, the trustee must distribute any excess funds to an organization or organizations described in section 501(c)(3) of the Internal Revenue Code and exempt from taxation under section 501(a) of the Internal Revenue Code. Funds from the legal expense fund may not be donated to an organization that was established by the employee beneficiary, an organization in which the employee beneficiary, their spouse, or their child is an officer, director, or employee, or an organization with which the employee has a covered relationship within the meaning of § 2635.502(b)(1). The trustee has sole discretion to select the 501(c)(3) organization.

(c) *Trust termination report.* After the trust is terminated, the employee

beneficiary must file a trust termination report that contains the information required by § 2635.1007(d) for the period of the last quarter report through the trust termination date. The report also must indicate the organization to which the excess funds were donated. The report is due 30 calendar days following the termination date of the trust.

(d) *Exception for anonymous whistleblowers.* An employee beneficiary who is an anonymous whistleblower may choose to file the trust termination report anonymously through the employee beneficiary's trustee or representative with the Office of Government Ethics.

§ 2635.1009 Pro bono legal services.

(a) *Acceptance of permissible pro bono legal services.* An employee may solicit or accept the provision of *pro bono* legal services for legal matters arising in connection with the employee's past or current official position, the employee's prior position on a campaign, or the employee's prior position on a Presidential Transition Team from:

- (1) Any individual who is not:
 - (i) An agent of a foreign government as defined in 5 U.S.C. 7342(a)(2);
 - (ii) A lobbyist as defined by 2 U.S.C. 1602(10) who is currently registered pursuant to 2 U.S.C. 1603(a); or
- (2) A person who does not have interests that may be substantially affected by the performance or nonperformance of an employee's official duties.

Note 1 to paragraph (a): Pursuant to § 2634.907(g) of this chapter, an employee beneficiary who is a public or confidential filer under part 2634 of this chapter must report gifts of *pro bono* legal services on the employee's financial disclosure report, subject to applicable thresholds and exclusions.

(b) *Role of agency ethics official.* An employee must confer with an agency ethics official to seek a determination as to whether the legal services are from a prohibited *pro bono* legal services provider before accepting the *pro bono* legal services.

Example 1 to paragraph (b): A Department of Justice employee is an eyewitness in an Inspector General investigation and is called to testify before Congress. A local law firm offers to represent the employee at no cost. The employee consults with an agency ethics official, who determines that the attorney who would represent the employee is neither an agent of a foreign government nor a lobbyist. However, the law firm is representing a party in a case to which the employee is assigned. The

ethics official determines that the law firm is a person who has interests that may be substantially affected by the performance or nonperformance of the employee's official duties. Accordingly, the employee may not accept the offer of *pro bono* legal services from the law firm.

Example 2 to paragraph (b): A Securities and Exchange Commission employee is sexually harassed by a supervisor and files a complaint. A nonprofit legal aid organization focusing on sexual harassment cases offers *pro bono* legal services to the employee at no cost. The employee consults with an agency ethics official, who determines that the attorney who would represent the employee is neither an agent of a foreign government nor a lobbyist, and neither the attorney nor the nonprofit legal aid organization has interests that may be substantially affected by the performance or nonperformance of the employee's official duties. Accordingly, the employee may accept the offer of *pro bono* legal services from the nonprofit legal aid organization.

Example 3 to paragraph (b): A Department of State employee is asked to testify in a legal proceeding relating to a prior position at the Department of Justice. An attorney at a large national law firm offers *pro bono* services to the employee. The employee confers with an agency ethics official who determines that although the attorney offering representation is neither an agent of a foreign government nor a lobbyist, the law firm is currently registered pursuant to 2 U.S.C. 1603(a) and has business before other parts of the Department of State. However, neither the attorney nor the law firm has interests that may be substantially affected by the performance or nonperformance of the employee's official duties. Accordingly, the employee may accept the offer of *pro bono* legal services.

[FR Doc. 2022–08130 Filed 4–20–22; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2022–0036]

RIN 2127–AM45

Uniform Procedures for State Highway Safety Grant Programs

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Notification of public meetings; request for comments (RFC).

SUMMARY: NHTSA is initiating a rulemaking process to implement changes to the Highway Safety Grant Program (the annual formula grants to States) in accordance with the Infrastructure Investment and Jobs Act. In order to ensure that the broadest possible cross-section of stakeholders is engaged from the onset of the process, NHTSA is publishing this RFC and announcing three public meetings to be held prior to issuing the Notice of Proposed Rulemaking (NPRM).

DATES: NHTSA will hold public meetings on May 2, May 4, and May 5, 2022, from 11:00 a.m. to 4:30 p.m., Eastern Daylight Time (EDT) each day. The meetings will be held virtually and provide an avenue for submission of comments. For planning purposes, NHTSA will allot time within each meeting for the topical areas outlined in this RFC, and to accommodate other issues a presenter may wish to raise. Upon registration, participants will identify whether they choose to provide verbal comments at the meeting and which topical areas they wish to address. Based on the results of that registration process, NHTSA will schedule time for each presenter, ensuring to the maximum extent practicable that all interested applicants have an opportunity for an oral presentation. However, the schedule will be on a first come first served basis. The public will also have the opportunity to submit written comments to the Docket concerning matters addressed in this notification. Written comments should be submitted no later than May 23, 2022.

ADDRESSES: The public meetings will be held virtually via Zoom for Government. The meetings' online links and a detailed agenda will be provided upon registration. You may send written comments, identified by the docket number listed at the beginning of this document or by the Regulatory Information Number (RIN), by any of the following methods:

- **Federal eRulemaking Portal:** <https://www.regulations.gov>. Follow the instructions for sending comments.
- **Mail:** Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- **Hand Delivery/Courier:** 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays. To be sure someone is

there to help you, please call 202-366-9826 before coming.

Instructions: All written submissions must include the agency name and docket number or RIN for this rulemaking. All comments received will be posted without change at <https://www.regulations.gov/> including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket go to <https://www.regulations.gov> at any time or to 1200 New Jersey Avenue SE, West Building, Ground Floor, Room W12-140, Washington, DC 20590 between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays. Telephone: 202-366-9826. If going in person, please call ahead to be sure someone is there to help you.

FOR FURTHER INFORMATION CONTACT: For more information, contact Amy Schick, Acting Director, Office of Grants Management and Operations, Regional Operations and Program Delivery, National Highway Traffic Safety Administration, Telephone number: (202) 366-2764. You may also contact NHTSA's Grants Management and Operations Office at nhtsaropdprogramquestions@dot.gov.

SUPPLEMENTARY INFORMATION:

Background: The "Highway Safety Grant Program," as used in this notification, refers to the annual formula grants to States, the District of Columbia, and U.S. Territories to carry out highway safety programs within their jurisdictions. NHTSA implements the Highway Safety Grant Program, in part, through regulations published at 23 CFR part 1300. The Infrastructure Investment and Jobs Act (Pub. L. 117-58) (*hereinafter* the Bipartisan Infrastructure Law) requires NHTSA to undertake a rulemaking to implement changes to the Highway Safety Grant Program consistent with statute. The statutory and regulatory changes will take effect for grants starting in Fiscal Year 2024. In order to ensure that the broadest possible cross-section of stakeholders is involved from the onset of the rulemaking process, NHTSA is publishing this RFC and will hold public meetings prior to issuing a NPRM. In addition, NHTSA seeks comments related to non-regulatory aspects of implementing the Bipartisan Infrastructure Law. All interested parties are invited to participate in this opportunity.

Public Participation

Registration: Registration is required for all attendees. There is no cost to register. Attendees should register online at the links below by April 28, 2022. Please provide your name, affiliation, email address, and indicate whether you wish to speak during the public meeting. Register at:

- May 2, 2022: https://usdot.zoomgov.com/meeting/register/vJltfughrz0pGqTf_q-7HL9klODBTQKR99s
- May 4, 2022: https://usdot.zoomgov.com/meeting/register/vJlsc-ihrtgtEwg9GuV_2WG4KOAmTrdmkiQ
- May 5, 2022: <https://usdot.zoomgov.com/meeting/register/vJltdemprDljEy9ev-zPEJUQ0ht1zBeTLIA>

Each public meeting will be five hours long, with a 30-minute break at the halfway point of the meeting. Speaker registration will be on a first-come, first-served basis. As described later in this notification, NHTSA is interested in hearing presentations concerning the following topics: The National Roadway Safety Strategy (NRSS); Reducing Disparities and Increasing Community Participation; Triennial Highway Safety Plans; Annual Grant Applications; and Performance Measures. Presenters may also convey their views on other matters related to the upcoming implementation of the highway safety grants under the Bipartisan Infrastructure Law.

Through the registration link, speakers will be asked to select which of the specified topic(s) they want to address, as well as issues they may wish to raise. It is anticipated that each speaker will have five minutes to offer verbal comments per topic, but not to exceed 15 minutes total, in order to ensure that all interested presenters are given the opportunity to present their views during the day of the meeting. During this allotted time, speakers may ask clarifying questions of NHTSA and NHTSA may ask clarifying questions of speakers. When called upon to provide comments, speakers will be asked to turn on their camera and state their name and organizations/affiliation. NHTSA may adjust time allotments on a running basis during the meeting if the meeting is running ahead of schedule, to provide additional opportunities for discussion.

NHTSA is committed to providing equal access to this meeting for all participants. Persons with disabilities in need of accommodation should contact NHTSA's Grants Management Office at nhtsaropdprogramquestions@dot.gov or

call (202) 366-2764 and ask for Amy Schick for help with your request by April 28, 2022. Closed captioning services will be available for this meeting through the Zoom platform.

Should it become necessary to cancel or reschedule the meeting due to an unforeseen circumstance, NHTSA will take all available measures to notify registered participants as soon as possible.

The public sessions will be recorded and transcribed. Both the recording and transcription will be made available after the event on the NHTSA website, listed under the title of the public meetings.

Written Comments: Comments may be submitted electronically or in hard copy during the 30-day comment period. Please submit all comments no later than 30 days after the publication of this public notification, by any of the methods listed earlier in this document. Written comments should refer to the docket number above and be submitted by one of the following methods:

- **Federal Rulemaking Portal:** <https://www.regulations.gov>. Follow the online instructions for submitting comments.

- **Mail:** Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- **Hand Delivery:** 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays. To be sure someone is there to help you, please call 202-366-9826 before coming.

Instructions: All written comment submissions must include the agency name and docket number. All comments received will be posted without change to <https://www.regulations.gov>, including any personal information provided. Please see the Privacy Act discussion below.

Docket: For access to the Docket, go to <https://www.regulations.gov> at any time or to 1200 New Jersey Avenue SE, West Building, Ground Floor, Room W12-140, Washington, DC 20590 between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays. Telephone: 202-366-9826. If going in person, please call ahead to be sure someone is there to help you.

Privacy Act: Anyone can search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act

Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78), or visit <https://www.regulations.gov/privacy.html>.

Confidential Business Information: If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information to the Chief Counsel, NHTSA, at 1200 New Jersey Avenue SE, Washington, DC 20590. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above. When you send a comment containing information claimed to be confidential business information, you should submit a cover letter setting forth the information specified in our confidential business information regulation (49 CFR part 512). To facilitate social distancing during COVID-19, NHTSA is temporarily accepting confidential business information electronically. Please see <https://www.nhtsa.gov/coronavirus/submission-confidential-business-information> for details.

Specific Guiding Questions: NHTSA has identified the five broad subject areas below as specific areas on which it requests comment, but welcomes comments and presentations related to any aspect of implementing the highway safety program.

National Roadway Safety Strategy

In 2020, 38,824 people were killed in motor vehicle crashes. In the first nine months of 2021, an estimated 31,720 people were killed in motor vehicle crashes, up an alarming 12% over 2020.¹ The fatality rate per 100 million vehicle miles traveled (VMT) increased by 21% from 1.11 in 2019 to 1.34 in 2020, the largest percentage increase on record. The proportion of people killed who were not in passenger vehicles (motorcyclists, pedestrians, pedalcyclists, and other nonoccupants) increased from a low of 20% in 1996 to a high of 34% in 2020.

U.S. DOT's NRSS and the Department's ongoing safety programs are working towards a future with zero roadway fatalities and serious injuries. The guiding paradigm of the NRSS is the Safe Systems Approach (SSA), which addresses roadway safety by building and reinforcing multiple layers of protection to prevent crashes and minimize the harm caused to those

involved when collisions occur. It is a holistic and comprehensive approach because it focuses on human mistakes and human vulnerability. SSA calls for a system with many redundancies in place to protect everyone.

With regards to the highway safety grant program regulations:

1. How can NHTSA, States, and their partners successfully implement NRSS and the SSA within the formula grant program to support the requirements in Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs Act (Pub. L. 117-58)?

2. What non-traditional partners and safety stakeholders can the States work with to implement NRSS and SSA?

Reducing Disparities and Increasing Community Participation

Traffic crashes are a leading cause of death for teenagers in America and disproportionately impact Black people, American Indians, and rural communities. Section 24102 of the Bipartisan Infrastructure Law requires State highway safety programs to provide "meaningful public participation and engagement from affected communities, particularly those most significantly impacted by traffic crashes resulting in injuries and fatalities."

In addition, Section 24102 requires that States "as part of a comprehensive program, support—(i) data-driven traffic safety enforcement programs that foster effective community collaboration to increase public safety; and (ii) data collection and analysis to ensure transparency, identify disparities in traffic enforcement, and inform traffic enforcement policies, procedures, and activities." The following questions seek input on strategies to reduce traffic safety disparities:

3. How can the Sections 402, 405, and 1906 formula grant programs contribute to positive, equitable safety outcomes for all? How can states obtain meaningful public participation and engagement from affected communities, particularly those most significantly impacted by traffic crashes resulting in injuries and fatalities?

4. How can the formula grant program require practices to ensure affected communities have a meaningful voice in the highway safety planning process?

5. What varied data sources, in addition to crash-causation data, should States be required to consult as part of their Highway Safety Plan problem identification and planning processes to inform the degree to which traffic safety disparities exist on their roadways?

Triennial Highway Safety Plan

Beginning in FY 2024, States will be required to submit a Highway Safety Plan (HSP) once every three years. The

¹ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813240>.

HSP is a statewide, coordinated *behavioral* safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries. The HSP identifies a State's key behavioral safety needs and guides investment decisions towards strategies and countermeasures with the most potential to save lives and prevent injuries. As set out in the Bipartisan Infrastructure Law, the longer-term HSP should be designed to allow the States to better reflect on the countermeasures to be implemented and inform annual project selections to combat these increasing trends.

6. How can the triennial cycle best assess longer-term behavior modification progress and connect year-to-year activities in a meaningful way?

7. How can the triennial HSP account for strategies that are proportionate to the State's highway safety challenges?

8. What information is needed to ensure the HSP provides comprehensive, longer-term, and data-driven strategies to reduce roadway fatalities and serious injuries?

Annual Grant Application

To combat the increasing number of fatalities on America's roadways, NHTSA's stewardship role is to ensure that States leverage their funds most effectively to decrease the number of roadway fatalities. An essential aspect of this is ensuring transparency in the use of funds. NHTSA must ensure that Federal dollars are spent as effectively as possible and that sufficient details are provided so taxpayers know where funds are spent.

Section 24102 of the Bipartisan Infrastructure Law requires States to submit an annual grant application that demonstrates alignment with the approved triennial HSP. The annual grant application requires, at a minimum, "updates, as necessary, to any analysis included in the triennial highway safety plan," "an identification of each project and subrecipient to be funded by the State using the grants during the upcoming grant year, subject to the condition that the State shall separately submit, on a date other than the date of submission of the annual grant application, a description of any projects or subrecipients to be funded, as that information becomes available," a description of the means by which the strategy of the State to use grant funds was adjusted and informed by the previous report" and "an application for any additional grants" under Section 405 and 1906.

9. What data elements should States submit to NHTSA in their annual grant application to allow for full transparency in the use of funds?

10. What types of data can be included in the annual grant application to ensure that projects are being funded in areas that include those of most significant need?

Performance Measures

Performance management provides a framework to support improved investment decisions that guide States to focus on areas likely to have the most meaningful impacts on saving lives, preventing injuries, and reducing traffic-related healthcare and other economic costs. NHTSA and the Governors Highway Safety Association previously collaborated on a minimum set of performance measures to be used by States to develop and implement behavioral HSPs and programs. States establish safety targets and report progress for 12 core outcome measures, 1 behavior measure, and 3 activity measures. The measures cover the major areas common to State HSPs and use existing data systems. Except for the addition of a bicyclist performance measure in 2015, the measures were last updated in 2008.

11. Should these measures be revised? If so, what changes are needed?

12. Section 24102 of the Bipartisan Infrastructure Law requires performance targets "that demonstrate constant or improved performance." What information should NHTSA consider in implementing this requirement?

13. What should be provided in the Annual Report to ensure performance target progress is assessed and that projects funded in the past fiscal year contributed to meeting performance targets?

14. How can the Annual Report best inform future HSPs?

Issued in Washington, DC.

Under authority delegated in 49 CFR 1.95 and 501.5.

Barbara Sauers,

Acting Associate Administrator, Regional Operations and Program Delivery.

[FR Doc. 2022-08484 Filed 4-20-22; 8:45 am]

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DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1952

[Docket No. OSHA-2021-0012]

RIN 1218-AD43

Arizona State Plan for Occupational Safety and Health; Proposed Reconsideration and Revocation

AGENCY: Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

ACTION: Proposed rule; request for written comments; notice of informal public hearing.

SUMMARY: On June 20, 1985, the Federal Occupational Safety and Health Administration (OSHA) granted Arizona's occupational safety and health plan (State Plan) final approval under Section 18(e) of the Occupational Safety and Health Act of 1970 (the OSH Act). In this notice, OSHA proposes to revoke its affirmative determination granting final approval to the State Plan. If revocation is determined to be appropriate, the Arizona State Plan will revert to initial approval and Federal authority for discretionary concurrent enforcement would resume, allowing Federal OSHA to ensure that private sector employees in Arizona are receiving protections that are at least as effective as those afforded to employees covered by Federal OSHA.

DATES:

Written comments: Comments and requests for a hearing must be submitted by May 26, 2022.

Informal public hearing: Any interested person may request an informal hearing concerning the proposed revocation. OSHA will hold such a hearing if the Assistant Secretary of Labor for Occupational Safety and Health (Assistant Secretary) finds that substantial objections have been filed. To allow for this possibility, the agency has tentatively scheduled an informal public hearing on this proposal, beginning August 16, 2022, at 10:00 a.m., ET. If necessary, the hearing will continue from 10:00 a.m. until 6:00 p.m., ET, on subsequent days. The hearing will be held virtually on WebEx. Additional information on how to access the informal hearing will be posted when available at <https://www.osha.gov/stateplans>.

Stakeholders should be aware that if, after reviewing the comments received during the written comment period, the Assistant Secretary finds that no substantial objections have been filed, then this informal public hearing will be cancelled. OSHA will provide notice in advance of the hearing date if the public hearing will not be held.

Notice of intention to appear to provide testimony or question witnesses at the hearing: Interested persons who intend to present testimony or question witnesses at the hearing must submit a notice of their intention to do so by May 11, 2022. Please note that a notice of intention to appear at the hearing is not the same as a substantial objection. To determine whether a substantial objection has been filed, the Assistant

Secretary will consider the substance of the written comments submitted.

Hearing testimony and documentary evidence: Interested persons who request more than 5 minutes to present testimony or who intend to submit documentary evidence at the hearing must submit the full text of their testimony and all documentary evidence by May 26, 2022. See “Public Participation” below for details on how to file a notice of intention to appear, submit documentary evidence at the hearing, and request an appropriate amount of time to present testimony.

Publication in Arizona: No later than 10 days following the date of publication of this notification in the **Federal Register**, Arizona shall publish, or cause to be published, reasonable notice within the State containing the same information contained herein.

ADDRESSES: *Written comments.* You may submit written comments and requests for an informal hearing electronically at www.regulations.gov, which is the Federal e-Rulemaking Portal. Follow the online instructions for making electronic submissions.

Instructions. All submissions must include the agency’s name and the docket number for this rulemaking (Docket No. OSHA–2021–0012).¹ All comments, including any personal information you provide, are placed in the public docket without change and may be made available online at www.regulations.gov. Therefore, OSHA cautions commenters about submitting information they do not want made available to the public or submitting materials that contain personal information (either about themselves or others), such as Social Security Numbers and birthdates. Submissions must clearly identify the issues addressed and the positions taken.

Informal public hearing: The hearing, if necessary, will be held virtually on WebEx.

Notice of intention to appear, hearing testimony, and documentary evidence: You may submit your notice of intention to appear, hearing testimony, and documentary evidence, identified by the agency’s name and the docket number (Docket No. OSHA–2021–0012) electronically at www.regulations.gov. Follow the online instructions for making electronic submissions.

Docket: To read or download comments or other material in the docket, go to Docket No. OSHA–2021–

0012 at www.regulations.gov. All comments and submissions are listed in the www.regulations.gov index; however, some information (e.g., copyrighted material) is not publicly available to read or download through that website. All comments and submissions, including copyrighted material, are available for inspection through the OSHA Docket Office. Contact the OSHA Docket Office at (202) 693–2350 (TTY number: (877) 889–5627) or <https://www.osha.gov/contactus/byoffice/dtsem/technical-data-center> for assistance in locating docket submissions. Other information about the Arizona State Plan is posted on the State’s website at <https://www.azica.gov/divisions/adosh> or <https://www.osha.gov/stateplans/az>.

FOR FURTHER INFORMATION CONTACT:

For press inquiries: Contact Frank Meilinger, OSHA Office of Communications, U.S. Department of Labor; telephone (202) 693–1999; email meilinger.francis2@dol.gov.

For general and technical information: Contact Douglas J. Kalinowski, Director, OSHA Directorate of Cooperative and State Programs, U.S. Department of Labor; telephone (202) 693–2200; email: kalinowski.doug@dol.gov.

SUPPLEMENTARY INFORMATION:

I. Background

Section 18 of the Occupational Safety and Health Act of 1980, 29 U.S.C. 651 *et seq.* (OSH Act), provides that states which desire to assume responsibility for the development and enforcement of occupational safety and health standards may do so by submitting, and obtaining Federal approval of, a State Plan. Procedures for State Plan submission and approval are set forth in regulations at 29 CFR part 1902. If the Assistant Secretary of Labor for Occupational Safety and Health (Assistant Secretary) finds that the State Plan satisfies, or will satisfy, the criteria set forth in Section 18(c) of the OSH Act and 29 CFR 1902.3 and 1902.4, “initial approval” is granted (29 CFR 1902.2(a)).²

² Section 18(c) provides that the Secretary shall approve the plan submitted by a State under subsection (b), or any modification thereof, if such plan in his judgement: Designates a State agency or agencies as the agency or agencies responsible for administering the plan throughout the State; provides for the development and enforcement of safety and health standards relating to one or more safety or health issues, which standards (and the enforcement of which standards) are or will be at least as effective in providing safe and healthful employment and places of employment as the standards promulgated under section 6 which relate to the same issues, and which standards, when applicable to products which are distributed or

A state may commence operations under its Plan after the initial approval determination is made, but the Assistant Secretary retains discretionary concurrent Federal authority over occupational safety and health issues covered by the Plan during the initial approval period as provided by Section 18(e) of the OSH Act (29 U.S.C. 667(e); see also, e.g., 29 CFR 1902.32(a), 1954.1(c)). OSHA regulations provide that in states with initially approved Plans, OSHA and the state enter into an operational status agreement describing the division of responsibilities between them, as deemed appropriate (29 CFR 1954.3).

If, after a period of no less than three years, the Assistant Secretary determines that the State Plan has satisfied and continues to meet all criteria in Section 18(c) of the OSH Act, the Assistant Secretary may make an affirmative determination under Section 18(e) of the OSH Act (referred to as “final approval” of the State Plan), which results in the relinquishment of concurrent Federal authority in the state with respect to occupational safety and health issues covered by the Plan (29 U.S.C. 667(e)). Procedures for Section 18(e) determinations are found in 29 CFR part 1902, subpart D. In general, in order to be granted final approval, actual performance by the state must be at least as effective as the Federal OSHA program in all areas covered under the State Plan.

Upon receiving final approval, a state’s ongoing retention of that approval is conditioned on its continued ability to maintain a program which meets the requirements of Section 18(c) of the OSH Act and is at least as effective as Federal program operations (29 CFR 1902.32(e); 29 CFR

used in interstate commerce, are required by compelling local conditions and do not unduly burden interstate commerce; provides for a right of entry and inspection of all workplaces subject to the OSH Act which is at least as effective as that provided in section 8, and includes a prohibition on advance notice of inspections; contains satisfactory assurances that such agency or agencies have or will have the legal authority and qualified personnel necessary for the enforcement of such standards; gives satisfactory assurances that such State will devote adequate funds to the administration and enforcement of such standards; contains satisfactory assurances that such State will, to the extent permitted by its law, establish and maintain an effective and comprehensive occupational safety and health program applicable to all employees of public agencies of the State and its political subdivisions, which program is as effective as the standards contained in an approved plan; requires employers in the State to make reports to the Secretary in the same manner and to the same extent as if the plan were not in effect; and provides that the State agency will make such reports to the Secretary in such form and containing such information, as the Secretary shall from time to time require (29 U.S.C. 667(c)).

¹ Documents submitted to the docket by OSHA or stakeholders are assigned document identification numbers (Document ID) for easy identification and retrieval. The full Document ID is the docket number plus a unique four-digit code.

1902.44(a)). As discussed in more detail below, this includes a requirement that, when Federal OSHA makes a program change that renders its program more effective, the State Plan must timely adopt a corresponding change in order to maintain a safety and health program that is at least as effective as Federal OSHA (Id.). After a State Plan receives final approval, Section 18(f) of the OSH Act requires OSHA to “make a continuing evaluation” of the State Plan, to ensure that it continues to meet all its obligations (29 U.S.C. 667(f)).

As noted above, one of Section 18(c)’s requirements is that State Plans must be at least as effective as Federal OSHA in their development and enforcement of occupational safety and health standards (29 U.S.C. 667(c)(2)). When OSHA promulgates a new safety and health standard, or adopts an enforcement policy that it determines necessary for the enforcement of such standards, State Plans are obligated to timely adopt identical or at least as effective standards or enforcement policies if they do not already have existing at least as effective measures in place (see 29 CFR 1953.4(b); 29 CFR 1953.5). This requirement also includes adoption of any emergency temporary standard (ETS) promulgated by Federal OSHA (29 CFR 1953.5(b)). State Plans must generally adopt standards and other Federal program changes that have an impact on the “at least as effective” status of the State Plan within six months of the Federal promulgation date for standards, or from the date of notification for other Federal program changes (29 CFR 1953.4(b); 29 CFR 1953.5(a)). Given the emergency nature of an ETS, State Plans must notify Federal OSHA of the action they will take with respect to adoption of the ETS within 15 days of its promulgation and complete adoption of the ETS within 30 days (29 CFR 1953.5(b)).

State Plans are aware of these obligations. They commit to meeting these obligations as part of the State Plan approval process (see, e.g., 50 FR 25561, 25562, 25570 (June 20, 1985)). They also are regularly reminded of these obligations by Federal OSHA in **Federal Register** notices announcing new standards and through OSHA’s State Plan Application (SPA). SPA is an electronic system designed to track State Plan adoption of OSHA standards and directives (among other items). OSHA enters each Federal standard and directive into SPA, which then generates a notice to all users, including State Plan users, reiterating the State Plan adoption requirements contained in the preamble or State Plan impact section of the standard or directive, and

including the specific due dates for response and adoption. In addition, State Plans receive communication and reminders of adoption requirements in regular meetings and discussions with Federal OSHA, and as part of the Federal Annual Monitoring and Evaluation (FAME) process. Further, State Plans annually recommit to meeting these requirements as part of their applications for Federal grants (see, e.g., Fiscal Year (FY) 2021 Instructions for 23(g) State Plan Grants, available at: www.osha.gov/sites/default/files/enforcement/directives/CSP_02-20-01.pdf (“In addition to its strategic and performance goals, each State Plan must continue to satisfy the mandated activities of the OSH Act and 29 CFR parts 1902 or 1956 (e.g., standards, enforcement program, prohibition against advance notice, etc.) and so certify in its application and demonstrate in actual performance.”)).

State Plans are also well aware of the potential consequences if they do not meet their obligations. Specifically, each grant of final approval specifies that the Assistant Secretary may revoke all or part of an affirmative 18(e) determination if a State does not continue to meet its obligations as a State Plan (see 29 CFR 1902.43(a)(4); 29 CFR 1902.44(b); see also 50 FR 25561, 25570 (June 20, 1985) (Arizona State Plan final approval discussing the possibility of revocation if the State fails to maintain a program which is at least as effective as operations under the Federal program, or if the State does not submit program change supplements to the Assistant Secretary as required by 29 CFR part 1953)).

The rules regarding revocation are spelled out in OSHA’s regulations. In short, these regulations provide that the Assistant Secretary may revoke all or part of an affirmative 18(e) determination if a State does not continue to meet its obligations as a State Plan (see 29 CFR 1902.32(e)–(f); 29 CFR 1902.44(b)). Specifically, the Assistant Secretary may initiate revocation proceedings if a State Plan does not maintain its commitment to provide a program for employee safety and health protection that meets the requirements of Section 18(c) of the OSH Act and is at least as effective as the Federal OSHA program in providing employee safety and health protection at covered workplaces (29 CFR 1902.32(e)–(f); 1902.44(a)–(b)). Again, maintaining such a program includes timely adopting plan changes when Federal OSHA makes program changes that add to or enhance existing protections or requirements (such as new standards or enforcement policies) (29 CFR

1902.32(e); 29 CFR 1902.44(a); 29 CFR 1953.4(b); 29 CFR 1953.5).

In addition to revocation of a State Plan’s final approval, OSHA may consider, if necessary, pursuing complete withdrawal of a State Plan’s approval upon finding that there is a “failure to comply substantially” with the State Plan (29 U.S.C. 667(f); 29 CFR 1902.44(b); see also 29 CFR part 1955). OSHA’s regulations permit the Assistant Secretary to use the revocation procedure to reinstate Federal enforcement authority in conjunction with plan withdrawal proceedings in order to ensure that there is no serious gap in the Assistant Secretary’s commitment to ensure safe and healthful working conditions so far as possible for every employee (29 CFR 1902.32(f)).

When OSHA determines that a State Plan’s failures warrant revocation of the State Plan’s final approval, OSHA may initiate proceedings to revoke final approval and reinstate Federal concurrent authority over occupational safety and health issues covered by the Plan (see 29 CFR 1902.32; 29 CFR 1902.44(b); 29 CFR 1902.47–.48). After reconsideration and revocation are complete, concurrent Federal enforcement and standards authority will be reinstated within the state “for a reasonable time” until Federal OSHA determines whether to restore final approval status or withdraw the State Plan’s approval, in total or in part (29 CFR 1902.52(b)). During this period of concurrent authority, an operational status agreement will delineate the areas of Federal and state coverage. Procedures for reconsideration and revocation of final approval are found at 29 CFR 1902.47–.53.

II. A History of Shortcomings in the Arizona State Plan

Arizona administers an OSHA-approved State Plan to develop and enforce occupational safety and health standards for public and private sector employers, pursuant to the provisions of Section 18 of the OSH Act (29 U.S.C. 667). OSHA granted the Arizona State Plan initial approval on November 5, 1974 (39 FR 39037). The Arizona Division of Occupational Safety and Health (ADOSH) is designated as the state agency responsible for administering the State Plan. Pursuant to Section 18(e) of the OSH Act, OSHA granted Arizona final approval effective June 20, 1985 (50 FR 25561).

As noted above, after a State Plan receives final approval, Section 18(f) of the OSH Act requires OSHA to “make a continuing evaluation” of the State Plan to ensure that it continues to meet

all of its obligations (29 U.S.C. 667(f)). OSHA's continued evaluation of Arizona's State Plan has revealed that over the past decade, the State Plan has routinely failed to maintain its commitment to provide a program that is at least as effective as the Federal OSHA program in providing employee safety and health protection at covered workplaces, as required by Section 18(c) of the Act.

As discussed more fully below, OSHA became concerned with Arizona's State Plan in 2012 with the Arizona legislature's passage of a bill which implemented residential construction fall protection requirements that were clearly less effective than the Federal requirements. Arizona did not remedy this issue until after OSHA initiated revocation proceedings in 2014 and formally rejected Arizona's fall protection requirements in 2015. Furthermore, in every FAME report since FY 2015, OSHA has included a finding regarding Arizona's failure to respond and/or adopt standards and directives in a timely manner. In addition, as OSHA has noted in recent FAME reports, Arizona has not yet fulfilled its State Plan obligation to adopt penalty levels that are at least as effective as Federal OSHA's, which were raised and tied to the Consumer Price Index in accordance with the Federal Civil Penalties Inflation Act of 1990, as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 on November 2, 2015. The State Plan also failed to satisfy its obligation to adopt requirements at least as effective as OSHA's June 21, 2021 COVID-19 ETS applicable to the healthcare industry (Healthcare ETS), and its handling of the ETS issue has raised questions for OSHA about whether the State Plan actually has the required authority to promulgate ETSs more generally. Together, this lengthy series of shortcomings in the Arizona program demonstrates fundamental deficiencies in the Arizona State Plan, and this has prompted OSHA to reconsider and propose revocation of its Section 18(e) determination until OSHA receives satisfactory assurances that these deficiencies have been addressed and that Arizona remains committed to providing a program meeting the requirements of section 18(c). The remainder of this section discusses this history of shortcomings in greater detail.

1. Arizona's 2012 Fall Protection Requirements

In 2012, the Arizona legislature passed SB 1441, which implemented residential construction fall protection

requirements that were clearly less effective than the Federal requirements, including, notably, that they only required employers to implement fall protection for workers at 15 feet where OSHA's requirements required fall protection at heights of 6 feet (79 FR 49465 (August 21, 2014)). OSHA officials conducted several meetings with Arizona between 2012 and 2014 to explain and illustrate how Arizona's fall protection requirements were not at least as effective as OSHA's, but Arizona continued to refuse to adopt at least as effective fall protection requirements.

In 2014, after more than two years of negotiations with Arizona, OSHA issued a **Federal Register** Notice similar to this one, reconsidering and proposing to revoke Arizona's final approval. It was only after OSHA initiated the revocation proceedings in 2014 and formally rejected Arizona's fall protection requirements in 2015 (80 FR 6652 (February 6, 2015)) that Arizona finally came into compliance with its State Plan obligations on fall protection. Specifically, the Arizona legislature passed SB 1307, which required repeal of the State's weaker fall protection requirements *if* OSHA formally rejected them. This Bill was approved by the Governor on April 22, 2014, and it eventually forced the state to revert to Federal OSHA's fall protection requirements. Given that change, OSHA withdrew its reconsideration of the Arizona State Plan's final approval (84 FR 35989 (July 26, 2019)). Although Arizona finally reverted to a fall protection standard that is at least as effective as Federal OSHA's standard, employees doing residential construction work in Arizona were not as protected as workers covered by Federal OSHA during the several years when Arizona's fall protection requirements were in effect.

2. Issues With Plan Effectiveness Dating Back to 2015

Since 2015, Arizona has also been delinquent in responding to and/or adopting several other items that require adoption in order for the State Plan to remain at least as effective as Federal OSHA. In every FAME report since FY 2015, OSHA has included a finding regarding Arizona's failure to respond to and/or adopt standards and directives in a timely manner (see, e.g., FY 2015 Comprehensive FAME Report; FY 2016 Follow-up FAME Report; FY 2017 Comprehensive FAME Report; FY 2018 Follow-up FAME Report; FY 2019 Comprehensive FAME Report; FY 2020 Follow-up FAME Report, all documenting Arizona's failure to adopt standards and/or directives.) The

failures included in these reports include, for example, Arizona's failure to adopt two important national emphasis programs as part of its State Plan—the National Emphasis Program on Amputations in Manufacturing Industries, CPL 03–00–022 (adoption due June 10, 2020), and the National Emphasis Program on Respirable Crystalline Silica, CPL 03–00–023 (adoption due August 4, 2020)—and the failure to adopt at least two occupational safety and health standards: The Beryllium Standard for Construction and Shipyards (adoption due February 27, 2021) and the Standards Improvement Project—Phase IV (adoption due November 14, 2019) (<https://www.osha.gov/stateplans/adoption/standards/2020-08-31>; <https://www.osha.gov/stateplans/adoption/standards/2019-05-14>). In addition, some of the standards that the State Plan has adopted over the years were adopted long after their due dates,³ and, in some cases, Arizona failed to provide OSHA with the required documentation of adoption. For example, although the State Plan advised OSHA that it had adopted the National Emphasis Program on Trenching and Excavation, CL–00–161 (adoption due April 5, 2019), OSHA's records indicate that any such adoption was completed past the deadline, and the State Plan has not provided OSHA with the required documentation of the adoption (see also, FY 2020 Follow-up FAME Report) (stating: “OSHA discussed the list of outstanding items [not adopted] during each quarterly meeting and reached out via email several times during the year to request updates. However, [the Arizona State Plan] did not provide a formal transmittal, updated web links, or SPA updates to close out any pending [Federal Program Changes (FPC)] during FY 2020. [The Arizona State Plan] must adopt and/or provide a plan change supplement [i.e., the required documentation] (transmittal) for 14 FPCs to become current.”)).

Furthermore, Arizona has not yet fulfilled its State Plan obligation to adopt penalty levels that are at least as effective as Federal OSHA's, which were raised and tied to the Consumer Price Index in accordance with the Federal Civil Penalties Inflation Act of 1990, as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 on November 2, 2015 (FY 2015 Comprehensive FAME

³ For example, on February 12, 2020, Arizona adopted the Final Rule on Walking-Working Surfaces and Personal Protective Equipment and the Final Rule on Crane Operator Certification Requirements, well after the respective due dates of May 18, 2017, and May 9, 2019.

Report; FY 2017 Comprehensive FAME Report; FY 2019 Comprehensive FAME Reports; FY 2016 Follow-up FAME Report; FY 2018 Follow-up FAME Report; FY 2020 Follow-up FAME Reports). Although Arizona recently developed a plan of action for accomplishing the legislative change necessary for adoption of OSHA's maximum penalties and minimum willful violation penalty level, the State has not yet adopted the levels and has failed to be at least as effective as Federal OSHA in this area for more than six years.

3. The 2021 Healthcare ETS

The Arizona State Plan also recently failed to adopt OSHA's Healthcare ETS, which OSHA issued on June 21, 2021, to protect healthcare and healthcare support service workers from occupational exposure to COVID-19 (86 FR 32376). Because the Healthcare ETS was published on June 21, 2021, the deadline for State Plans to communicate their intended actions to OSHA was July 6, 2021, and the due date for State Plan adoption of the ETS or of an at least as effective alternative was July 21, 2021. Arizona failed to meet both of these deadlines.

OSHA had a number of communications with Arizona over the months following issuance of the Healthcare ETS. These conversations were unfruitful, however; the Arizona State Plan never adopted an ETS or other comprehensive standard to protect healthcare workers in the State from COVID-19.⁴ Moreover, during the

period in which OSHA was working to address this issue with the State Plan, the Industrial Commission of Arizona held a meeting in which it suggested that the State Plan might not even have the appropriate authority to adopt ETSs based on OSHA's finding of "grave danger" and "necessity," as required by the OSH Act and OSHA regulations. Rather, the Commission maintained that Arizona Revised Statutes (A.R.S.) only authorizes the State Plan to adopt an ETS by making its own independent findings on "grave danger" and "necessity" (Industrial Commission of Arizona Meeting Minutes, dated October 7, 2021). Specifically, § 23-414(A) provides that "[t]he Commission may provide for emergency temporary standards or regulations to take immediate effect upon filing with the secretary of state, if it determines that employees are exposed to grave danger . . . and that such emergency standard or regulation is necessary/to protect employees from such danger" (emphasis added).

As has been explained in greater detail elsewhere in this proposal, the Arizona State Plan is required by Section 18(c) of the OSH Act to provide for the development of standards that are at least as effective as Federal OSHA's standards, and this includes an obligation to timely adopt *all* standards, including any ETS, issued by Federal OSHA (see 29 CFR 1953.4(b); 29 CFR 1953.5). This obligation does not give the State Plan discretion to determine *which* Federal standards to adopt or to independently evaluate the need for such a standard. Accordingly, OSHA specifically invites comment from the Arizona State Plan to clarify how its state law complies with the Federal OSHA requirement that a State Plan adopt a Federal ETS within 30 days of its promulgation. And OSHA separately invites the Arizona State Plan to include in its comment an explanation of why that process was not followed for adoption of the Healthcare ETS.

III. Reconsideration and Proposed Revocation of Section 18(e) Determination

The OSH Act obligates OSHA to ensure, so far as possible, safe and healthful working conditions for every working person in the Nation (29 U.S.C. 651(b)). The agency carries out this mission, in part, by encouraging States to assume the fullest responsibility for the administration and enforcement of their own occupational safety and health laws (29 U.S.C. 651(b)(11)).

effective February 16, 2022, and provided documentation for OSHA's review.

Where, as in Arizona, it appears that a State Plan has not maintained its commitment to provide a program for employee safety and health that meets the requirements of Section 18(c) of the OSH Act and is at least as effective in protecting workers as the Federal OSHA program, then the Assistant Secretary may reconsider their decision to grant an affirmative 18(e) determination (see 29 CFR 1902.32(e)–(f); 29 CFR 1902.44(a); 29 CFR 1902.47(a)).

OSHA's decision to move forward with reconsideration and proposed revocation at this time is based on its continuing evaluation of Arizona's State Plan, the history of shortcomings described above, and the numerous areas where the State Plan continues to be less effective than OSHA (including on penalty levels and important emphasis programs). OSHA is concerned that, together, the State Plan's actions suggest that Arizona is either unable or unwilling to maintain its commitment to provide a program for employee safety and health protection that meets the requirements of Section 18(c) of the OSH Act and is at least as effective as the Federal OSHA program in providing employee safety and health protection at covered workplaces.

As previously noted, OSHA's regulations provide that the Assistant Secretary may at any time reconsider the decision to grant an affirmative 18(e) determination based on results of the continuing evaluation of a State Plan (29 CFR 1902.47). If, as a result of OSHA's reconsideration, OSHA proposes to revoke its affirmative 18(e) determination, OSHA's regulations provide that a notice must be published in the **Federal Register** and interested parties must be provided an opportunity to submit in writing, data, views, and arguments on the proposal within 35 days after publication (29 CFR 1902.48–.49). Further, the regulations provide that any interested person may request an informal hearing, and that OSHA must afford an opportunity for an informal hearing on the proposed revocation if the Assistant Secretary finds that substantial objections have been filed (29 CFR 1902.49(c)).

In order to allow for the submission of informed and specific public comment, OSHA encourages commenters to review the documents contained in Docket No. OSHA–2021–0012, which can be accessed electronically at www.regulations.gov.

In drafting their comments, stakeholders should note that OSHA is not beginning proceedings for the withdrawal of approval of the plan, or any portion thereof, pursuant to 29 CFR part 1955, but rather is only proposing

⁴ Although Arizona failed to adopt the Healthcare ETS in its entirety, as required, it informed OSHA that it did adopt two of the rule's provisions eight months after issuance of the Healthcare ETS when advised that OSHA considered those provisions to be permanent regulations under Section 8 of the OSH Act. OSHA adopted the recordkeeping and reporting provisions of the Healthcare ETS (29 CFR 1910.502(q) and (r)) under two sections of the OSH Act: Section 6(c), 29 U.S.C. 655(c) (which empowers the Secretary to issue emergency temporary standards), and Section 8, 29 U.S.C. 657 (which authorizes the Secretary to engage in certain activities related to recordkeeping and reporting, including issuing regulations). As to the issuance of these provisions under Section 8, OSHA found good cause to forgo notice and comment in light of the grave danger presented by the pandemic. On February 9, 2022, OSHA advised State Plans at an Occupational Safety and Health State Plan Association (OSHSPA) meeting that State Plans must revise their State regulations to either adopt the recordkeeping requirements related to the COVID-19 log (*i.e.*, the requirements at 29 CFR 1910.502(q)(2)(ii) and (q)(3)(ii)–(iv)) and reporting (*i.e.*, 29 CFR 1910.502(r)) as a permanent regulation or demonstrate that such a change is unnecessary because their State Plan already has requirements that are the same as or at least as effective as the Federal OSHA requirements. OSHA notified State Plans of this obligation in SPA on February 14, 2022. Arizona informed OSHA that it subsequently adopted the COVID-19 log and reporting provisions

revocation of Arizona's affirmative 18(e) determination at this time. This is because OSHA believes that the issues with Arizona's State Plan discussed above can be temporary in nature if Arizona takes prompt steps to resolve OSHA's concerns and demonstrates a commitment to meet its obligations in a timely manner in the future.

OSHA further wishes to advise stakeholders that their comments should be directed only to OSHA's proposed revocation and the bases for that revocation (see 29 CFR 1902.49(c) (requiring that OSHA allow for submission of comments "on the proposal" and "particularized written objections" specifically "concerning the proposed revocation")). Accordingly, OSHA will consider comments addressing matters other than the proposed revocation to be beyond the scope of this proposal, and the agency will not consider such comments in assessing whether "substantial objections" have been filed necessitating an informal public hearing, nor in making a final decision on the proposal. OSHA provides here a non-exhaustive list of matters that the agency deems outside of the scope of this proposal:

- Any comment criticizing the regulatory and statutory requirements imposed on State Plans as a condition of their continuous approval to operate a State Plan.
- Any comment directed to the wisdom and/or necessity of the various OSHA standards and directives referenced in this **Federal Register** Notice.
- Any comment directed to Federal OSHA's legal authority to promulgate the Healthcare ETS, or the advisability of its promulgation, including but not limited to OSHA's findings on Grave Danger and Necessity, and the need for any particular provision or requirement of the Healthcare ETS.
- Any comment related to OSHA's now-withdrawn November 5, 2022, ETS on COVID-19 Vaccination and Testing (see 86 FR 61402; 87 FR 3928) or the litigation that arose out of it.
- Any comment suggesting that OSHA's findings in the Healthcare ETS, or other rulemakings, are not relevant to or do not apply to workers or workplaces in Arizona.

A. Effect of Determination

After review of any written comments received and the results of any informal hearing held, the Assistant Secretary will determine whether Arizona has failed to meet its obligations to provide a program for employee safety and health protection that meets the

requirements of Section 18(c) of the OSH Act and is at least as effective as the Federal OSHA program in providing employee safety and health protection at covered workplaces, and, if so, whether the Assistant Secretary's affirmative Section 18(e) determination granting final approval of the Arizona State Plan should be revoked (29 CFR 1902.52). A notice of the Assistant Secretary's determination will be published in the **Federal Register**.

In the event that the Assistant Secretary determines that revocation is appropriate, the **Federal Register** notice will specify that upon revocation, concurrent Federal enforcement and standards authority will be reinstated within the State for a reasonable time, until the Assistant Secretary has determined whether to withdraw approval of the State Plan, or any separable portion thereof, under 29 CFR 1955, or to reinstate Section 18(e) approval if the State has met the required criteria (29 CFR 1902.52(b)). OSHA notes that the present proposal is to revoke the Arizona State Plan's final approval in full. However, in making a final determination, OSHA may consider instead revoking only a separable portion of the Arizona State Plan's final approval, based on, *e.g.*, changed circumstances or other practical considerations.

OSHA further notes that, as provided by regulation, if the agency were to revoke the Arizona State Plan's final approval, resumption of Federal OSHA's concurrent enforcement and standards setting authority would occur automatically (see 29 CFR 1902.52(b)). Any notice announcing the revocation of the State Plan's final approval would specify the areas of coverage over which OSHA intends to immediately resume and exercise that authority. The agency's final decision on which issues (if any) to resume coverage over will depend on factors including information submitted in response to this **Federal Register** Notice, as well as the circumstances at the time the revocation decision is made.

Finally, OSHA notes its regulations provide that in states with initially approved plans, OSHA and the state enter into a procedural agreement describing the division of responsibilities between them (29 CFR 1954.3). OSHA typically refers to these types of agreements as "Operational Status Agreements" or OSAs. If the Assistant Secretary decides to revoke Arizona's affirmative Section 18(e) determination, Federal OSHA's resumption of coverage will be announced in the final determination notice and the State and OSHA will

enter into an OSA that describes the division of responsibilities between them, consistent with any resumption of coverage announced in OSHA's final determination notice. Such an agreement could also include a timetable for remedial action to make state operations as least as effective in order for OSHA to consider whether to reinstate the State Plan's final approval status. Notice would be provided in the **Federal Register** of any such agreement.

IV. Documents of Record

All information and data presently available to OSHA relating to this proceeding have been made a part of the record and placed in the OSHA Docket Office. Most of these documents have also been posted electronically at www.regulations.gov, which is the Federal e-Rulemaking Portal; however, some information (*e.g.*, copyrighted material) is not publicly available to read or download through that website. All comments and submissions are available for inspection and, where permissible, copying at the OSHA Docket Office, U.S. Department of Labor, 200 Constitution Avenue NW, Room N-3508, Washington, DC 20210; telephone: 202-693-2350 (TTY number: 877-889-5627).

V. Public Participation

The Assistant Secretary's decision whether to continue or revoke the Arizona State Plan's affirmative 18(e) determination will be made after careful consideration of all relevant information presented in the rulemaking (29 CFR 1902.52(a)). To aid the Assistant Secretary in making this decision, OSHA is soliciting public participation in this process. Interested parties are encouraged to submit all relevant information, views, data, and arguments related to the indices, criteria, and factors presented in 29 U.S.C. 667(c) and 29 CFR part 1902, as they apply to the Arizona State Plan.

Notice in the State of Arizona: Arizona is required to publish reasonable notice of the contents of this **Federal Register** notice within the State no later than 10 days following the date of publication of this notice (29 CFR 1902.49(a)).

Written comments: OSHA invites interested persons to submit written data, views, and comments with respect to this reconsideration and proposed revocation of affirmative Section 18(e) determination of the Arizona State Plan. When submitting comments, persons must follow the procedures specified above in the sections titled **DATES** and **ADDRESSES**. Submissions must clearly identify the issues addressed and the

positions taken. Comments received by the end of the specified comment period will become part of the record and will be available for public inspection and, where permissible, copying at the OSHA Docket Office, as well as online at www.regulations.gov (Docket Number OSHA–2021–0012).

Informal public hearing: Pursuant to 29 CFR 1902.49(c), any interested person may request an informal hearing concerning the reconsideration and proposed revocation. To allow for this possibility, the agency has tentatively scheduled a virtual informal public hearing on this proposal. For more information on the timing of the hearing, see the section titled **DATES** above.

OSHA will hold the informal hearing if the Assistant Secretary finds that substantial objections have been filed. However, if, after reviewing the comments received during the written comment period, the Assistant Secretary finds that no substantial objections have been filed, then the informal public hearing will be cancelled. OSHA will provide notice in advance of the hearing date if the public hearing will not be held.

The informal hearing, if held, will be legislative in type (29 CFR 1902.50). The rules of procedure for the hearing will be those contained in 29 CFR 1902.40 (29 CFR 1902.50). The essential intent is to provide an opportunity for participation and comment by interested persons which can be carried out expeditiously and without rigid procedures which might unduly impede or protract the 18(e) determination process (1902.40(a)).

As required by 29 CFR 1902.40(b)(1), the hearing's presiding officer will be a hearing examiner appointed under 5 U.S.C. 3105 (*i.e.*, an Administrative Law Judge (ALJ)). The ALJ will provide an opportunity for cross-examination on pertinent issues (1902.40(b)(2)). The hearing shall be reported verbatim, and a transcript shall be available to any interested person on such terms as the ALJ may provide (1902.40(b)(3)). At the hearing, the ALJ will have all the power necessary or appropriate to conduct a fair and full hearing, including the powers to: Regulate the course of the proceedings; dispose of procedural requests, objections, and comparable matters; confine the presentation to the issues specified in the notice of hearing, or, where appropriate, to matters pertinent to the issue before the Assistant Secretary; regulate the conduct of those present at the hearing by appropriate means; take official notice of material facts not appearing in the evidence in the record, as long as

the parties are afforded an opportunity to show evidence to the contrary; and in the ALJ's discretion, keep the record open for a reasonable and specified time to receive additional written recommendations with supporting reasons and any additional data, views, and arguments from any person who has participated in the oral proceeding (29 CFR 1902.40(c)(1)–(c)(6)).

Notice of intention to appear to provide testimony or question witnesses at the hearing: Interested persons who intend to present testimony or question witnesses at the hearing must file a notice of intention to appear by using the procedures specified above in the sections titled **DATES** and **ADDRESSES**. This notice must provide the following information:

- Name, address, email address, and telephone number of each individual who will give oral testimony;
- Name of the establishment or organization each individual represents, if any;
- Occupational title and position of each individual testifying;
- Approximate amount of time required for each individual's testimony;
- A brief statement of the position each individual will take with respect to the issues raised by the reconsideration and proposed revocation; and
- A brief summary of documentary evidence each individual intends to present at the hearing, if any.

OSHA emphasizes that while the hearing is open to the public, only individuals who file a notice of intention to appear may question witnesses and participate fully at the hearing. If time permits, and at the discretion of the ALJ, an individual who did not file a notice of intention to appear may be allowed to testify at the hearing, but for no more than 5 minutes. As noted above, a notice of intention to appear at the hearing is not the same as a substantial objection and OSHA will only hold a hearing if the Assistant Secretary finds that substantial objections have been filed. If interested persons believe that they have substantive objections to this proposal and wish to present testimony or question witnesses, they should submit written comments detailing their objections (see more details above on how to submit written comments) and separately file a notice of intention to appear. The Assistant Secretary will consider all written comments submitted when determining whether a substantial objection has been filed.

Hearing testimony and documentary evidence: Individuals who request more than 5 minutes to present their oral

testimony at the hearing or who will submit documentary evidence at the hearing must submit the full text of their testimony and all documentary evidence by using the procedures specified above in the sections titled **DATES** and **ADDRESSES**.

The agency will review each submission and determine if the information it contains warrants the amount of time the individual requested for the presentation. If OSHA believes the requested time is excessive, the agency will allocate an appropriate amount of time for the presentation. The agency also may limit to 5 minutes the presentation of any participant who fails to comply substantially with these procedural requirements, and may request that the participant return for questioning at a later time. Before the hearing, OSHA will notify participants of the time the agency will allow for their presentation and, if less than requested, the reasons for its decision.

VI. Certification of the Hearing Record and Assistant Secretary Final Determination

Upon the completion of the oral presentations, the transcripts thereof, together with written submissions on the proceedings, exhibits filed during the hearing, and all post-hearing comments, recommendations, and supporting reasons shall be certified by the officer presiding at the hearing to the Assistant Secretary (29 CFR 1902.40(d); 29 CFR 1902.51).

Within a reasonable time after the close of the comment period (if no hearing is held) or after the certification of the record (if a hearing is held), after consideration of all relevant information which has been presented, the Assistant Secretary shall issue a decision on the continuation or revocation of the affirmative 18(e) determination (29 CFR 1902.52(a)). Any decision revoking such determination shall also reflect the Assistant Secretary's determination that concurrent Federal enforcement and standards authority will be reinstated within the State for a reasonable time until the Assistant Secretary has withdrawn their approval of the plan, or any separable portion thereof, pursuant to part 1955 of this chapter or has determined that the State has met the criteria for an 18(e) determination pursuant to the applicable procedures of Part 1902, Subpart D (29 CFR 1902.52(b)). The Assistant Secretary's decision will be published in the **Federal Register** (29 CFR 1902.53).

VII. Federalism

Executive Order 13132, "Federalism," emphasizes consultation between

Federal agencies and the States and establishes specific review procedures the Federal government must follow as it carries out policies which affect state or local governments. OSHA has included in the Background section of today's request for public comments an explanation of the relationship between Federal OSHA and the State Plans under the OSH Act. Although it appears that the specific consultation procedures provided in section 6 of Executive Order 13132 are not mandatory for final approval-related decisions under the OSH Act (including revocation of final approval), which neither impose a burden upon the state nor generally involve preemption of any state law, OSHA has nonetheless consulted extensively with Arizona on the matter of maintaining its State Plan in compliance with Federal OSHA.

VIII. Regulatory Flexibility Act

OSHA certifies pursuant to the Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) that this reconsideration and proposed revocation, if finalized, will not have a significant economic impact on a substantial number of small entities. OSHA's decision to reconsider and proposal to revoke the affirmative Section 18(e) determination granting final approval of the Arizona State Plan would not place small employers in Arizona under any new or different requirements beyond what the State Plan was required to adopt to remain at least as effective as OSHA. No additional burden would be placed upon the State government beyond the responsibilities already assumed as part of the approved plan.

List of Subjects in 29 CFR Part 1952

State Plans, Approval.

Authority and Signature

Douglas L. Parker, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue NW, Washington, DC, authorized the preparation of this notice. OSHA is issuing this notice under the authority specified by Section 18 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 667), Secretary of Labor's Order No. 8–2020 (85 FR 58393 (Sept. 18, 2020)), and 29 CFR parts 1902, 1952, 1953, 1954, and 1955.

Signed in Washington, DC.

Douglas L. Parker,

Assistant Secretary of Labor for Occupational Safety and Health.

For the reasons stated in the preamble, OSHA proposes to amend 29 CFR part 1952 as follows:

PART 1952—APPROVED STATE PLANS FOR ENFORCEMENT OF STATE STANDARDS

■ 1. The authority citation for part 1952 is revised to read as follows:

Authority: Sec. 18, 84 Stat. 1608 (29 U.S.C. 667); 29 CFR part 1902; Secretary of Labor's Order No. 1–2012 (77 FR 3912, Jan. 25, 2012), or 8–2020 (85 FR 58393, Sept. 18, 2020), as applicable.

Subpart A—List of Approved State Plans for Private-Sector and State and Local Government Employees

■ 2. Amend § 1952.19 by redesignating paragraph (d) as paragraph (e) and adding a new paragraph (d) to read as follows:

§ 1952.19 Arizona.

* * * * *

(d) On [DATE OF FINAL DETERMINATION], OSHA modified the State Plan's approval status from final approval to initial approval, and reinstated concurrent Federal authority pending a determination as to whether OSHA will make a new final approval determination or withdraw the State Plan's approval under part 1955. All issues over which OSHA decides to assume enforcement authority, as well as any operational status agreement entered into by OSHA and Arizona, will be announced in the **Federal Register**.

* * * * *

[FR Doc. 2022–08424 Filed 4–20–22; 8:45 am]

BILLING CODE 4510–26–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2022–0173; FRL–9702–01–R9]

Air Plan Approval; Nevada; Clark County Department of Environment and Sustainability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a revision to the Clark County Department of Environment and Sustainability (DES) portion of the Nevada State

Implementation Plan (SIP). This revision clarifies and amends an administrative rule consistent with changes to state statutes and county code.

DATES: Comments must be received on or before May 23, 2022.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2022–0173 at <https://www.regulations.gov>. For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. If you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Christine Vineyard, EPA Region IX, 75 Hawthorne St., San Francisco, CA 94105. By phone: (415) 947–4125 or by email at vineyard.christine@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, “we,” “us” and “our” refer to the EPA. This proposal addresses the following local rule: Clark County DES Section 4, Control Officer, revised 12/17/19 and submitted 3/16/20. Elsewhere, in the Rules and Regulations section of this **Federal Register**, we are approving the local rule in a direct final action without prior proposal because we believe this SIP revision is not controversial. If we receive adverse comments, however, we will publish a timely withdrawal of the direct final rule and address the

comments in subsequent action based on this proposed rule.

We do not plan to open a second comment period, so anyone interested in commenting should do so at this

time. If we do not receive adverse comments, no further activity is planned. For further information, please see the direct final action.

Dated: April 13, 2022.

Deborah Jordan,

Acting Regional Administrator, Region IX.

[FR Doc. 2022-08420 Filed 4-20-22; 8:45 am]

BILLING CODE 6560-50-P

Notices

Federal Register

Vol. 87, No. 77

Thursday, April 21, 2022

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

April 18, 2022.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested regarding; whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by May 23, 2022 will be considered. Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting “Currently under 30-day Review—Open for Public Comments” or by using the search function.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number, and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it

displays a currently valid OMB control number.

Animal and Plant Health Inspection Service

Title: Importation of Swine Hides, Bird Trophies, and Deer Hides.

OMB Control Number: 0579–0307.

Summary of Collection: The Animal Health Protection Act (AHPA) of 2002 is the primary Federal law governing the protection of animal health. The law gives the Secretary of Agriculture broad authority to detect, control, or eradicate pests or diseases of livestock or poultry. The AHPA is contained in Title X, Subtitle E, Sections 10401–18 of Public Law 107–171, May 13, 2002, the Farm Security and Rural Investment Act of 2002. The Animal and Plant Health Inspection Service (APHIS) protects the health of the U.S. livestock and poultry population. The regulations in 9 CFR parts 94 and 95 (referred to below as the regulations) prohibit or restrict the importation of specified animal products into the United States to prevent the introduction into the U.S. livestock population of certain contagious animal diseases. Sections 95.16 and 95.17 of the regulations contain, among other things, specific processing and certification requirements for untanned hides and skins and bird trophies.

Need and Use of the Information: APHIS will collect information from forms VS 16–28, VS 16–29 and VS 16–78, certificates, and written statements, to ensure that bird trophies and certain animal hides pose a negligible risk of introducing certain contagious, infectious, or communicable animal diseases into the United States. If this information is not collected, it would significantly hinder APHIS's ability to ensure that these commodities pose a minimal risk of introducing foreign animal diseases into the United States.

Description of Respondents: Foreign Government; Business or other for-profit.

Number of Respondents: 167.

Frequency of Responses: Reporting; On occasion.

Total Burden Hours: 471.

Ruth Brown,

Departmental Information Collection Clearance Officer.

[FR Doc. 2022–08507 Filed 4–20–22; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Rural Housing Service

[Docket No. RHS–22–MFH–0007]

Notice of Solicitation of Applications for Section 514 Off-Farm Labor Housing Loans and Section 516 Off-Farm Labor Housing Grants for New Construction for Fiscal Year 2022

AGENCY: Rural Housing Service, United States Department of Agriculture.

ACTION: Notice and updates to a previous notice.

SUMMARY: The Rural Housing Service (RHS) (Agency), a Rural Development (RD) agency of the United States Department of Agriculture (USDA), published a notice of solicitation of applications (NOSA) in the **Federal Register** on February 2, 2021, entitled “Notice of Solicitation of Applications for Section 514 Off-Farm Labor Housing Loans and Section 516 Off-Farm Labor Housing Grants for New Construction for Fiscal Year 2021.” The Notice described the methods used to distribute funds, the pre-application and final application processes, and submission requirements. On August 3, 2021, the Agency published a subsequent notice to announce the second round of solicitation of competitive pre-applications and corrected inadvertent errors in the NOSA published on February 2, 2021, in the **Federal Register**. The purpose of this Notice is to announce the third round of solicitation of applications and to make updates to the initial notice.

DATES: Eligible pre-applications submitted to the Production and Preservation Division, Processing and Report Review Branch in response to this Notice, will be accepted until July 15, 2022, 12:00 p.m., Eastern Standard Time. See the **SUPPLEMENTARY INFORMATION** section of the NOSA published in the **Federal Register** on February 2, 2021, at 86 FR 7840, entitled “Notice of Solicitation of Applications for Section 514 Off-Farm Labor Housing Loans and Section 516 Off-Farm Labor Housing Grants for New Construction for Fiscal Year 2021” for additional information.

ADDRESSES: This funding announcement will be available on Grants.gov. Applications submitted in response to this Notice must be submitted

electronically to the Production and Preservation Division, Processing and Report Review Branch. Specific instructions on how to submit applications electronically are provided under the **SUPPLEMENTARY INFORMATION** section of the NOSA published in the **Federal Register** on February 2, 2021, FR citation 86 FR 7840, entitled "Notice of Solicitation of Applications for Section 514 Off-Farm Labor Housing Loans and Section 516 Off-Farm Labor Housing Grants for New Construction for Fiscal Year 2021" for additional information.

FOR FURTHER INFORMATION CONTACT: Abby Boggs, Branch Chief, Program Support Branch, Production and Preservation Division, Multifamily Housing Programs, Rural Development, United States Department of Agriculture, via email: abby.boggs@usda.gov or phone at: (615) 490-1371.

SUPPLEMENTARY INFORMATION: The amount of program dollars available will be determined by yearly appropriations. Available loan and grant funding amounts can be found at the following link: <https://www.rd.usda.gov/programs-services/multifamily-housing-programs/farm-labor-housing-direct-loans-grants>. Expenses incurred in developing preapplications and final applications will be at the applicant's sole risk.

Rural Development: Key Priorities

The Agency encourages applicants to consider projects that will advance the following key priorities:

- Assisting Rural communities recover economically from the impacts of the COVID-19 pandemic, particularly disadvantaged communities;
- Ensuring all rural residents have equitable access to RD programs and benefits from RD funded projects; and
- Reducing climate pollution and increasing resilience to the impacts of climate change through economic support to rural communities.

For further information, visit <https://www.rd.usda.gov/priority-points>.

Authority

This solicitation of applications is authorized under 7 CFR 3560 and Section 516 of the Housing Act of 1949, 42 U.S.C. 14867.

Background

As required by 7 CFR 3560.556, RHS is required to publish in the **Federal Register**, an annual NOSA for each round of the Section 514 Off-Farm Labor Housing Loans and Section 516 Off-Farm Labor Housing Grants for New Construction program. The first notice

was published on February 2, 2021 in the **Federal Register**, at 86 FR 7840. The Notice announced the initial opening round and described the method used to distribute funds, the pre-application and final application process, and submission requirements.

A second notice published on August 3, 2021 in the **Federal Register**, at 86 FR 41811. That notice announced the second round of solicitation for competitive pre-applications and corrected inadvertent errors published in the initial notice.

There are three rounds of pre-application submissions and selections for this program until July 15, 2022. For details, applicants should refer to the full funding announcement notice published on February 2, 2021, in the **Federal Register** at 86 FR 7840. This notice announces the third round that opens May 16, 2022. The available loan and grant funding will be posted to the RHS website by April 21, 2022. Pre-applications must be submitted by July 15, 2022, 12:00 p.m., Eastern Standard Time. RHS will notify applicants by September 1, 2022. Final applications must be submitted by November 1, 2022, 12:00 p.m., Eastern Standard Time.

Updates

The following information are updates to the Notice published on February 2, 2021 in the **Federal Register**.

(1). In the **Federal Register** of February 2, 2021, in FR Doc. 2021-02193, on page 7840, in the third column, update the "Third Round" list to read:

Third Round

1. Available loan and grant funding posted to the RHS website by April 21, 2022.
2. Pre-applications will be accepted on May 16, 2022.
3. Pre-applications must be submitted by July 15, 2022, 12:00 p.m., Eastern Standard Time.
4. RHS notification to applicants by September 1, 2022.
5. Final applications must be submitted by November 1, 2022, 12:00 p.m., local time.

(2). On page 7841, in the second column in the second paragraph, revise paragraph to read:

All award commitments will be valid for a period of twelve months. Applicants dependent upon third-party funding, including but not limited to local-, state-, and federal resources through competitive and non-competitive application rounds, must obtain a satisfactory commitment of

those funds, as determined by the Agency, within the twelve-month time frame. An extension of the award commitment of up to three months may be given, at the sole discretion of the Agency, and will be based on project viability, current program demand, and availability of program funds. Applicants unable to satisfy this condition of the award commitment will be subject to having the award rescinded and will be required to reapply in future rounds.

(3). On page 7841, in the third column in the second paragraph, revise paragraph to read:

In order to enhance customer service and the transparency of this program, RHS will publish a list of awardees, the loan and/or grant amounts of their respective awards and the final score as computed by RHS in accordance with the dates listed in this Notice. This will be done for each funding round. This information can be found at: <https://www.rd.usda.gov/programs-services/multifamily-housing-programs/farm-labor-housing-direct-loans-grants>. RHS reserves the right to post all information submitted as part of the pre-application and final application package, which is not protected under the Privacy Act, on a public website with free and open access to any member of the public.

Requests for Additional Funds To Address Funding Gaps/Cost Overruns in Previously-Awarded FLH Transactions

There are three categories of previously-awarded FLH transactions that may need additional FLH funds to complete a project awarded under a previous FLH New Construction NOSA. The following provides eligibility criteria under this NOSA and other guidance for properties in each of the three categories:

Category 1: Properties that have (a) received a FLH award under a previous NOSA and (b) have not yet closed on their initial award, are eligible to apply under this NOSA if the funds requested, when combined with the initial award under the original NOSA for which the project was initially funded, exceeds the per-project award cap under that NOSA. Owners applying under this category will need to successfully demonstrate financial viability of the transaction and only need to apply for the additional FLH funds needed to complete the transaction.

Category 2: Properties that have (a) received a FLH award under a previous NOSA and (b) have not yet closed on their initial award may request an amendment to their initial funding award outside of this NOSA, if the

funds needed, when combined with the initial award under the original NOSA for which the project was initially funded, *does not* exceed the per-project award cap under that NOSA. Owners seeking amendments to initial awards will need to successfully demonstrate financial viability of the transaction and are eligible to apply for this amendment outside of this NOSA, as it is considered an amendment to the current award. Amendments to awards are subject to available funding. Owners with transactions in this category may contact Rural Development's Office of Multifamily Housing's Production & Preservation Division for additional guidance.

Category 3: Properties that have (a) received a FLH award under a previous NOSA and (b) have closed on their financing are considered eligible for subsequent loans under § 3560.73, which may be applied for outside of this NOSA, on a rolling basis, subject to available funding. Owners with transactions in this category may contact Rural Development's Office of Multifamily Housing's Production & Preservation Division for additional guidance.

(4). On page 7843, at the bottom of the second column, correct section (b) to read:

(b) RHS will host a workshop on May 11, 2022 to discuss the application process, the borrower's responsibilities under the Off-FLH program, among other topics. Participants should pre-register for the session using the following link: <https://attendee.gotowebinar.com/register/2244949179096454669>.

(5). On page 7851, in the first column, revise paragraph (19) to read as follows:

(19) An acceptable Post Construction Capital Needs Assessment (CNA) in accordance with 7 CFR 3560.103(c) and the addendum at the end of this NOSA. The CNA will be used to underwrite the proposal to determine financial feasibility. The CNA must be approved by the Agency prior to the Agency underwriting the transaction. A CNA is comprised of nine main sections:

- Definitions;
- Contract Addendum;
- Requirements and Statement of Work (SOW) for a CNA;
- The CNA Review Process;
- Guidance for the Multi-Family Housing (MFH) CNA Recipient Regarding Contracting for a CNA;
- Revising an Accepted CNA During Underwriting;
- Updating a CNA;
- Incorporating a Property's Rehabilitation into a CNA; and
- Repair and Replacement Schedule.

Additionally, there are seven attachments which accompany the CNA addendum identified as follows:

- Attachment A, ADDENDUM TO THE CAPITAL NEEDS ASSESSMENT CONTRACT
- Attachment B, CAPITAL NEEDS ASSESSMENT STATEMENT OF WORK
- Attachment C, FANNIE MAE PHYSICAL NEEDS ASSESSMENT GUIDANCE TO THE PROPERTY EVALUATOR
- Attachment D, CNA e-Tool Estimated Useful Life Table
- Attachment E, CAPITAL NEEDS ASSESSMENT REPORT
- Attachment F, SAMPLE CAPITAL NEEDS ASSESSMENT REVIEW REPORT
- Attachment G, CAPITAL NEEDS ASSESSMENT GUIDANCE TO THE REVIEWER

The CNA Addendum can be found at www.rd.usda.gov/programs-services/multi-family-housing-direct-loans.

(6). On page 7852, in the first column, add paragraph (31) to read as follows:

(31) Current (not older than six months from the date of issuance) combination comprehensive credit reports for the applicant, entity and principals must be submitted and considered during the Agency's review for eligibility determination. In the past, the Agency has required the applicant to submit the credit report fee. In lieu of the applicant submitting the fee, the Agency will require the applicant to provide the credit report. It is the Agency's expectation that this change will create an efficiency in the application process that did not exist, which should assist with streamlining the application process for the applicant. Only Credit reports provided by accredited major credit bureaus will be accepted.

Addendum: Capital Needs Assessment Process

A Capital Needs Assessment (CNA) provides a repair schedule for the property in its present condition, indicating repairs and replacements necessary for a property to function properly and efficiently over a span of 20 years.

The purpose of this Addendum is to provide clarification and guidance on the Rural Development CNA process. The document includes general instructions used in completing CNA reports, specific instructions on how to use the expected useful life tables, and a set of applicable forms including the Terms of Reference form; Systems and Conditions forms; and Evaluator's Summary forms.

1. Definitions

The following definitions are provided to clarify terms used in conjunction with the CNA process:

CNA Recipient: This will be who enters into the contract with the CNA Provider. The Recipient can be either the property owner or applicant/transferee.

"As-Is" CNA: This type of CNA is prepared for an existing MFH property and reports the physical condition including all Section 504 Accessibility and Health and Safety items of the property based on that moment in time. This CNA can be useful for many program purposes other than the MPR Demonstration program such as: An ownership transfer, determining whether to offer pre-payment aversion incentive and evaluating or resizing the reserve account. The "as-is" report will include all major repairs and likely some minor repairs that are typically associated with the major work: Each major component, system, equipment item, etc. inside and outside; building(s); property; access and amenities in their present condition. A schedule of those items showing the anticipated repair or replacement timeframe and the associated hard costs for the ensuing 20-year term of the CNA serves as the basis or starting point in evaluating the underwriting that will be necessary to determine the feasibility and future viability of the property to continue serving the needs of eligible tenants.

"Post Rehabilitation" CNA: This type of CNA builds on the findings of the accepted "as-is" CNA and is typically prepared for a project that will be funded for major rehabilitation. The Post Rehabilitation CNA is adjusted to reflect the work intended to be performed during the rehabilitation. The assessment must be developed from the rehabilitation project plans and any construction contract documents to reflect the full extent of the planned rehabilitation.

Life Cycle Cost Analysis (LCCA): A LCCA is an expanded version of a CNA and is defined at 7 CFR Section 3560.11. The LCCA will determine the initial purchase cost, the operation and maintenance cost, the "estimated useful life," and the replacement cost of an item selected for the project. The LCCA provides the borrower with the information on repair or replacement costs and timeframes over a 20-year period. It also provides information that will assist with a more informed component selection and can provide the borrower with a more complete financial plan based on the predictive

maintenance needs associated with those components. If the newly constructed project has already been completed without any previous LCCA requirements, either an “as-is” CNA or LCCA can be provided to establish program mandated reserve deposits. An Architect or Engineer is the best qualified person(s) to prepare this report.

Consolidation: In some circumstances, RD may permit two or more properties to be consolidated as defined in 7 CFR 3560, § 3560.410 when it is in the best interests of the Government. The CNA Recipient must consult with the RD loan official before engaging the CNA Provider in any case where the CNA intends to encompass more than a single (one) existing RD property to determine if a consolidated CNA may be acceptable for RD underwriting.

2. Contract Addendum

RD uses a Contract Addendum to supplement the basic CNA Agreement or “Contract”, between the CNA Recipient and CNA Provider, with additional details and conditions. It can be found in *Attachment A, Addendum to Capital Needs Assessment Contract* and must accompany all contracts executed between the CNA Recipient and CNA Provider for CNAs used in RD transactions. If any conflicts arise between the “Contract” and “Contract Addendum”, the “Contract Addendum” will supersede.

The Contract Addendum identifies the responsibilities and requirements for both the CNA Recipient and the CNA Provider. To assure proper completion of the contract documents the following key provisions must be completed:

a. The Contract Addendum will include the contract base amount for the CNA Provider’s cost for services on page A–2, and provisions for additional services to establish the total price for the CNA.

b. Item I e, will require an itemized listing for any additional anticipated services and their unit costs including future updates and revisions that may be required before the CNA is accepted by RD. *Note: Any cost for updating a CNA must be included, in the “additional services” subpart, of the original CNA Contract.*

c. The *selection criteria boxes* in II a, will identify the type of CNA being provided.

d. In III a, the required language for the blank on “report format” is: “*USDA RD CNA Template, current RD version, in Microsoft Excel format*”. This format will import directly into the RD

underwriting template for loan underwriting purposes.

3. Requirements and Statement of Work (SOW) for a CNA

Minimum requirements for a CNA acceptable to RD can be found in *Attachment B, Capital Needs Assessment Statement of Work*. This is supplemented by *Attachment C, Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator*. To resolve any inconsistency in the two documents, Attachment B, the CNA SOW, will in all cases prevail over *Attachment C, Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator*. (For example, on page C–2 of Attachment C, Fannie Mae defines the “term” as “term of the mortgage and two years beyond”. For USDA, the “term” will be 20 years, as defined in the CNA SOW.)

Attachment B includes the required qualifications for the CNA Provider, the required SOW for a CNA assignment, and general distribution and review instructions to the CNA Provider. The CNA Providers must be able to report the current physical condition of the property and not base their findings on the financial condition of either the property or the CNA Recipient.

Attachment C is a three-part document RD has permission to use as reference to the CNA process throughout the RD MFH program efforts. The three key components of this Attachment are: (1) Guidance to the property evaluator; (2) expected useful life tables; and (3) a set of forms.

An acceptable CNA must appropriately address within the report and narrative all Accessibility Laws and Requirements that apply to Section 515 and Sections 514/516 MFH properties. The CNA Provider must assess how the property meets the requirements of accessibility to persons with disabilities in accordance the Uniform Federal Accessibility Standards (UFAS) and Section 504 Accessibility Requirements. It is the responsibility of the Provider to inspect and verify whether all accessibility features are compliant.

4. The CNA Review Process

A CNA used by RD will be reviewed by the designated RD CNA Reviewer with experience in construction, rehabilitation, and repair of MFH properties, especially as it relates to repair and replacement.

A CNA report must be obtained by the CNA Recipient from an *independent third-party CNA Provider that has no identity of interest* with the property owner, management agent, applicant/transferee or any other principle or

affiliate defined in 7 CFR part 3560, § 3560.11. The CNA Recipient will contract with the CNA Provider and is therefore the client of the provider. However, the CNA Recipient must consult with RD, before contracting with a CNA Provider to review *Guidance Regarding Contracting for a CNA*. The RD CNA Reviewer will evaluate a proposed agreement or engagement letter between the CNA Recipient and the CNA Provider using *Attachment G, Capital Needs Assessment Guidance to the Reviewer*, prior to reviewing any CNA report. Unacceptable CNA proposals, contracts or reports will be returned to the CNA Recipient for appropriate corrections before they will be used for any underwriting determinations.

The CNA Reviewer will also review the cost of the CNA contract. The proposed fee for the CNA must be approved as an eligible housing project expense under 7 CFR 3560.103(c) for the agreement to be acceptable and paid using project funds. In most cases, the CNA service contract amount has not exceeded \$3,500 based on the Agency’s most recent cost analysis.

Borrowers and applicants are encouraged to obtain multiple bids in all cases. However, there is no Agency requirement to select the “low bidder” under this UL and the CNA Recipient may select a CNA Provider that will provide the best value, based on qualifications, as well as price after reviewing references and past work.

If the CNA is funded by the property’s reserve account, a minimum of two bids is required if the CNA service contract amount is estimated to exceed \$5,000 as specified in HB–2–3560, Chapter 4, Paragraph 4.17 B. If the CNA contract under this UL is funded by another source, or will be under \$5,000, a single bid is acceptable.

If the proposed agreement is acceptable, the reviewer will advise the appropriate RD servicing official, who will in turn inform the CNA Recipient. If the proposed agreement is unacceptable, the reviewer will notify the servicing official, who will notify the CNA Recipient and the CNA Provider in writing and identify actions necessary to make the proposed CNA agreement acceptable to RD. Upon receipt of a satisfactory agreement, the RD CNA Reviewer should advise the appropriate RD servicing official or underwriting official to accept the proposal.

The CNA Reviewer will review the preliminary CNA report submitted to RD by the CNA Provider using Attachment D and write the preliminary CNA review report. During the CNA

review process, the CNA Reviewer and underwriter will consult with the servicing field office most familiar with the property for their input and knowledge of the property. Any differences of opinion that exist regarding the findings must be mutually addressed by RD staff. If corrections are needed, the loan official will notify the CNA Recipient, in writing, of any revisions necessary to make the CNA report acceptable to RD. The CNA Reviewer will review the final CNA report and deliver it to the loan official. The final report must be signed by both the CNA Reviewer and the loan official (underwriter). Upon signature by both, this report becomes the “accepted” CNA indicating the actual condition of the property at the time of the CNA inspection—a “snapshot” in time—and will be marked “Current Property Condition” for indefinite retention in the borrower case file.

A CNA Provider should be fully aware of the intended use for the CNA because it can impact the calculations necessary to perform adequate accessibility assessments and can impact the acceptability of the report by RD. Unacceptable reports will not be used for any RD underwriting purposes even though they may otherwise be acceptable to the CNA Recipient or another third-party lender or participant in the transaction being proposed.

5. Guidance Regarding Contracting for a CNA

CNA Recipients are responsible for choosing the CNA Provider they wish to contract with, and for delivering an acceptable CNA to Rural Development. RD in no way guarantees the performance any Provider nor the acceptability of the Provider’s work.

CNA Recipients are advised to request an information package from several CNA Providers and to evaluate the information before selecting a provider. At a minimum, the information package should include a list of qualifications, a list of references, a client list, and a sample CNA report. However, the CNA Recipient may request any additional information they feel necessary to evaluate potential candidates and select a suitable provider for this service. Consideration for the type of CNA required should be part of the CNA Recipient’s selection criteria and inserted into the contract language as well. The necessary skill set to perform the “as-is” versus the Post Rehabilitation CNA or a LCCA needs to be considered carefully. Knowledge of the accessibility laws and standards and the ability to read and understand plans

and specifications should also be among the critical skill elements to consider.

Attachment A, Contract Addendum must be submitted to RD with the contract and signed by the CNA Recipient and CNA Provider. The proposed agreement with the CNA Recipient and CNA Provider must meet RD’s qualification requirements for both the provider and the CNA SOW, as specified in *Attachment B, Capital Needs Assessment Statement of Work*. RD must review the proposed agreement between the CNA Recipient and the CNA Provider, and concur only if all of the RD requirements and conditions are met. (See the previous Section 3 of this UL, *The CNA Review Process*.)

Please note: It is in the CNA Recipient’s best interest to furnish the CNA Provider with the most current and up-to-date property information for a more comprehensive and thorough CNA report. RD recommends that the CNA Recipient conduct a pre-inspection meeting with the Owner, Property Manager, maintenance persons familiar with the property, CNA Provider, and Agency Representatives at the site. This meeting will allow a forum to discuss specific details about the property that may not be readily apparent to all parties involved during the review process, as well as making some physical observations on-site. Certain issues that may not be evident to the CNA Provider due to weather conditions at the time of review should also be discussed and included in the report. Additionally, other issues that may need to be addressed include environmental hazards, structural defects, and complex accessibility issues. It is imperative that the Agency be fully aware of the current physical condition of the property at the time the CNA is prepared. An Agency representative must make every effort to attend the CNA Providers on-site inspection of the property unless the Agency has performed a physical inspection of the property within the previous 12 months.

This pre-inspection meeting also allows the CNA Provider to discuss with the CNA Recipient total number of units to be inspected, as well as identifying any specific units that will be inspected in detail. The minimum number of inspected units required by the Agency for an acceptable CNA is 50 percent. However, inspecting a larger number of units generally provides more accurate information to identify the specific line items to be addressed over the “term” being covered by the CNA report. CNA Recipients are encouraged to negotiate with the CNA Provider to achieve inspection of all units whenever

possible. The ultimate goal for the CNA Recipient and CNA Provider, as well as the Agency, is to produce the most accurate “baseline or snapshot” of current physical property conditions for use as a tool in projecting future reserve account needs.

6. Revising an Accepted CNA During Underwriting (Applies to RD Actions)

During transaction underwriting and analysis, presentation of the information contained in the “accepted” CNA may need to be revised by RD to address financing and other programmatic issues. The loan underwriter and the CNA Reviewer will work together to determine if revisions are necessary to meet the financial and physical needs of the property, and established RD underwriting or servicing standards and principals. These may involve shifting individual repair line items reported in the CNA, moving work from year to year, or other adjustments that will improve cash flow. The revised underwriting CNA will be used to establish reserve funding schedules as well as operating budget preparation and analysis and will be maintained by RD as supporting documentation for the loan underwriting.

The initial CNA, prepared by the CNA Provider, will be maintained as an independent third-party record of the current condition of the property at the beginning of the 20-year cycle.

Original CNAs will be maintained in the case file, clearly marked as either “Current Property Condition” (“As-is”), “Post Rehabilitation Condition”, or “Revised Underwriting/Replacement Schedule”, as applicable. *Note:* The CNA Provider is not the appropriate party to “revise” a CNA which has already been approved by the CNA Recipient and concurred with by the Agency. The CNA Provider’s independent opinion was the basis of the “As is” or “Post Rehabilitation” CNA. The CNA developed for underwriting may only be revised by RD staff during the underwriting process or as part of a post-closing servicing action.

7. Updating a CNA (Applies to “As-is” and “Post-Rehabilitation” That Have Not Been Accepted by RD)

A completed CNA more than a year old at the time of the RD CNA review and approval must be “updated” prior to RD approval. Likewise, if at the time of underwriting the CNA is more than a year old (but less than two years old), it must be updated before the transaction can be approved.

To update a CNA, the CNA Provider must review property changes (repairs, improvements, or failures) that have

occurred since the date of the original CNA site visit with the CNA Recipient, review costs and quantities, and submit an updated CNA for approval. However, if the site visit for the CNA occurred more than two years prior to the loan underwriting, the CNA Provider should perform a new site visit to verify the current project condition.

Once the CNA has been updated, the CNA Provider will include a statement noting “This is an updated CNA of the earlier CNA dated _____,” at the beginning of the CNA’s Narrative section. The CNA Provider should reprint the CNA with a new date for the updated CNA, and provide a new electronic copy to the CNA Recipient and RD.

If the CNA age exceeds 2 years at the time of the RD CNA review and approval, the CNA Provider will need to repeat the site visit process to re-evaluate the condition of the property. The original report can remain the basis of the findings.

8. Incorporating a Property’s Rehabilitation Into a CNA

A CNA provides a repair schedule for the property in its present condition, indicating repairs and replacements necessary for a property to function properly and efficiently over a span of 20 years. It is not an estimate of existing rehabilitation needs, or an estimate of rehabilitation costs. If any rehabilitation of a MFH development is planned as part of the proposed transaction, a rehabilitation repair list (also called a “Scope of Work”) must be developed independently based on the CNA repair schedule. This rehabilitation repair list

may be developed by the CNA Recipient, a project Architect, or an outside party (such as the CNA Provider, when qualified) hired by the CNA Recipient.

The CNA Recipient must not use repair line-item costs taken from the CNA to develop the rehabilitation cost estimates for the rehabilitation loan, as these costs will not be accurate. The repair costs in a CNA are based on estimated costs for the property. Typically, these costs include the labor, materials, overhead and profit, but do not include applicable “soft costs”. For example, for CNA purposes, the probable cost is to send a repairman out, remove an appliance, and put a new one in its place. For rehabilitation cost estimates, the CNA Recipient typically intends to hire a general contractor to oversee and supervise the rehabilitation work, which is then considered a “soft cost”. The cost of rehabilitation includes the costs for that general contractor, the general contractor’s requirements, the cost of a project Architect (if one is used), tenant relocation (if needed), and interim financing (if used), which are considered “soft costs” attributed to the rehabilitation costs for the project.

If a “Post Rehabilitation” CNA is required and authorized by RD, a copy of the rehabilitation repair list or SOW must be provided to the CNA Provider. The CNA Provider will prepare a “Post Rehabilitation” CNA indicating what repairs are planned for the property in the coming 20 years based on conditions after the rehabilitation is completed. Items to be replaced during

rehabilitation that will need to be replaced again within the 20 years, such as appliances, will be included in the “Post Rehabilitation” CNA. Items that will not need replacement during the coming 20 years, such as a new roof, will not need to be calculated in the “Post Rehabilitation” CNA. The line item should not be removed from the CNA, but the cost data should be zeroed out. Appropriate comments should be included in the CNA report to acknowledge the SOW or rehabilitation/repairs that were considered.

9. Repair and Replacement Schedule

A CNA is not a formal repair and replacement schedule and cannot be used as an exact replacement schedule. A CNA is an estimate of the anticipated replacement needs for the property over time, and the associated replacement costs. The goal of a CNA is to estimate the replacement times based on the Expected Useful Life (EUL) to assure funds are available to replace equipment as it is needed. Hopefully, materials will be well maintained and last longer than estimated in the CNA. However, the CNA cannot be used to mandate replacement times for the identified building components. The RD underwriter may find it necessary to adjust the proposed replacement schedule during the course of the underwriting to allow for an adequate Annual Deposit to Replacement Reserves (ADRR) payment that will sustain the property over a 20-year period and keep rents below the maximum rents that are allowed.

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ADDENDUM TO THE CAPITAL NEEDS ASSESSMENT CONTRACT
(Between CNA Recipient and CNA Provider)

This ADDENDUM to the CAPITAL NEEDS ASSESSMENT (CNA) CONTRACT between _____ (CNA Provider) and (CAN Recipient) is entered into this _____ day of _____, 20____ (the Effective Date) for the property known as _____ (Property).

DEFINITIONS

“**Acceptance**” means the act of an authorized representative of the United States Department of Agriculture (USDA), Rural Development by which the representative approves the Agreement and this Addendum.

“**Agreement**” means the contract entered into between the CNA Recipient and the CNA Provider to provide a CNA of the property. It includes the original document entered into between the parties, this Addendum, and any other document incorporated by the Agreement.

“**CNA Report**” means a report in general conformance with the *Statement of Work* that is attached hereto and the *Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator*.

“**CNA Reviewer**” means a person assigned to review the CNA report on behalf of USDA, Rural Development program.

“**CNA Provider**” means the person or entity entering into the Agreement with the CNA Recipient to perform all work required to provide a CNA of the property.

“**CNA Recipient**” means the person or persons who have or will have legal title and/or ownership of a property participating under USDA, Rural Development programs.

“**Program**” means any MFH program authorized by Section 514 or 515 of the Housing Act of 1949, as amended and administered by USDA, Rural Development.

“**Property**” means any structure(s), dwelling(s) and/or land that is the subject of any Multi-family Housing program administered by the U.S. Department of Agriculture, Rural Development, and for which a CNA is required by U.S. Department of Agriculture, Rural Development.

“**USDA RD**” means the United States Department of Agriculture, Rural Development.

“**Work**” means the *CNA Statement of Work* as attached hereto.

RECITALS

WHEREAS, the property known as _____ **Property** is included in the program being administered by **USDA RD**.

WHEREAS, as a condition of participating in the program, the CNA Recipient is required to obtain a CNA for the Property, which has been prepared in accordance with the Statement of Work; CNA Recipient and CNA Provider must agree to a Contract to prepare a CNA for the Property.

WHEREAS, CNA Provider and CNA Recipient are parties to that certain CNA Contract, dated _____, 20____, **Agreement**, pursuant to which the CNA Recipient has retained the services of CNA Provider to provide a CNA for the Property for the base Contract amount of \$ _____ and for itemized “Additional

Services” as follows: (see listing inspection i.e. below,) in the amount of \$_____ per item or service. The total Contract amount is \$_____.

WHEREAS, the parties hereby wish to incorporate into the **Agreement** and its Exhibits certain additional provisions as set forth below.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree to the following additional terms and conditions as follows:

ADDITIONS TO THE AGREEMENT
(Between CNA Recipient and CNA Provider)

I. CNA RECIPIENT OBLIGATIONS

a. SUBMISSION OF CONTRACT FOR CONCURRENCE BY USDA RD

CNA Recipient will promptly submit to **USDA RD** for review and concurrence a copy of the executed **Agreement** and this Addendum.

b. NOTIFICATION OF CONCURRENCE OF AGREEMENT BY USDA RD

Upon receiving notification from **USDA RD** of its concurrence of the Agreement, CNA Recipient will promptly furnish CNA Provider with evidence of this acceptance.

c. ACCESS TO THE PROPERTY

Owner must allow CNA Provider, CNA Recipient and; if requested, the CNA Reviewer, complete, timely and unconditional access to the Property and its premises for the purpose of conducting the inspections that are required for preparing the CNA.

d. FURNISHING PROPERTY INFORMATION

At least _____ (number) day(s) prior to the commencement of the CNA inspection, CNA Recipient must furnish to the CNA Provider all information on any recent and/or immediate planned capital improvements to the Property, any recent and/or scheduled repairs, finalized maintenance schedules, and information on the existence of any known environmental hazards at the property. In addition, Owners must provide any available information on any current “Transition Plan” and “Self-Evaluation” addressing proposals for complying with all applicable Federal accessibility requirements, and other matters relevant to the CNA Statement of Work.

Specific items the CNA Recipient should provide the CNA Provider include:

1. Contact information for the Owner's representative at **USDA RD** (Name, address, telephone number, e-mail address, etc.).
2. Building-by-building breakdown of units by bedroom count and type (i.e. garden, townhouse, fully accessible) to aid in selection of units at time of inspection.
3. Any available plans or blueprints of development (as-built drawings preferred).
4. Listing of capital expenditures for the Property over the past three to five years and maintenance expenditures over the last 12 months.
5. Maintenance logs to help identify any significant or systemic areas of concern.
6. Copies of invoices for any recently completed capital improvements and/or copies of quotes for any pending/planned capital improvements.
7. A valid/current Section 504 Accessibility Self Evaluation/Transition Plan (no more than three years old).
8. Any available capital/physical needs assessments (CNAs/PNAs) that were previously completed.
9. Any available structural or engineering studies that were previously completed.
10. Any available reports related to lead-based paint testing or other environmental hazards (i.e. asbestos, mold, underground storage tanks, etc.) that were previously completed and/or related certifications if environmental remediation has been completed.
11. Reports including, but not limited to: local Health Department inspections, soils analysis, USDA's last compliance review, or USDA's last security inspection.
12. If the CNA Recipient certifies below that (a) third-party funds have been committed for use in the transaction for which the CNA is required; and (b) **USDA RD** has communicated its acceptance or acknowledgement of the availability of these funds (whether by an award of points in a portfolio revitalization program or otherwise); and (c) these funds are to be used towards a rehabilitation program at the Property, the CNA Recipient will provide the CNA Provider with a copy of the proposed rehabilitation scope and budget.

e. ADDITIONAL SERVICES

When a CNA exceeds the one-year duration beyond the original acceptance date of the document, the report is required to be updated. The Contract should designate anticipated tasks and costs that would be necessary to update the CNA after the one-year or two-year time frames have been exceeded. The Contract should include, at a minimum:

1. Identify Property where update is required.
2. Itemized list of possible tasks to be performed to accomplish the update: Time and materials
Interviews
Document reviews (photos, construction documents, contracts, etc.).
Additional site visit as required (travel).
3. Associated unit costs for each task required for the CNA Update.

II. CNA RECIPIENT'S CERTIFICATIONS – CNA Recipient hereby certifies as follows:**a. STATUS OF PROPOSED CNA (check correct box)**

- ☐ CNA Recipient **has** received a **commitment** for third-party funding for the revitalization transaction for which application was made. **The CNA Provider will create the CNA based on existing conditions “as is”**. CNA Recipient is responsible for the Scope of Work and budget for the proposed rehabilitation of the Property (typically obtained from a project Architect), incorporating any requirements of the third-party lender. The CNA Provider will then revise their CNA based on the anticipated conditions “post rehabilitation” of the Property after the rehabilitation. Both CNAs will be provided to Rural Development.
- ☐ CNA Recipient **has requested or will request** third-party funds but has no commitment. If CNA Recipient does not have a commitment of third-party funds, CNA Reviewer agrees that it is within USDA RD's sole discretion to determine whether the CNA Provider should consider any rehabilitation Scope of Work and budget for a “post rehabilitation” CNA after conducting a CNA based on the Property's “as is” condition. USDARD will make such a determination on the likelihood of third-party funds being made available. CNA Provider should verify this decision with Rural Development prior to performing a “post rehabilitation” CNA.
- ☐ CNA Recipient does not anticipate third-party funds being utilized, or does not anticipate a rehabilitation at this time. In this case, the CNA Provider will conduct a normal review of the Property, not including/anticipating any rehabilitation, and base the CNA on the existing conditions at the Property.

NOTE: The CNA Recipient will not instruct the CNA Provider to perform a “post rehabilitation” CNA without approval from Rural Development.

b. COMPLIANCE WITH STATEMENT OF WORK

CNA Recipient must allow the CNA Provider to comply with the Statement of Work in creating and developing a CNA report that will incorporate and meet all terms, conditions and requirements as set forth in the attached Statement of Work. CNA Recipient must not impede or attempt to influence the CNA Provider's impartiality in applying the CNA requirements and guidelines established by Rural Development in describing the physical condition and needs of the Property.

c. AVAILABILITY

CNA Recipient must be available to promptly discuss any draft or preliminary CNA report with the CNA Provider and must address in writing to the CNA Reviewer any desired revisions, corrections, comments or concerns the CNA Recipient may have relating to such report.

d. ADDRESSING DEFICIENCIES

CNA Recipient must promptly furnish to the CNA Provider USDA RD's CNA Review report. CNA Recipient will discuss any deficiencies observed by the CNA Reviewer and request that the deficiencies be addressed within five (5) working days. Should deficiencies not be addressed within five (5) working days, CNA Recipient may order the CNA Provider in writing to suspend, delay, or interrupt all or any part of the work under the Agreement that remains to be performed for such period of time until deficiencies identified by the CNA Reviewer have been satisfied.

e. PAYMENT

The CNA Recipient must pay the CNA Provider 50 percent of the negotiated contract amount for the base CNA Contract once the Contract for CNA services has been executed. If the CNA Recipient chooses to include and pay for additional services from the CNA Provider exceeding the negotiated base CNA Contract amount, then these services must be listed and the payment method addressed in the Contract between the CNA Recipient and CNA Provider. If funds for additional services will be withdrawn from the reserve account, then 50 percent of the base Contract amount along with the additional services will be paid once the contract for CNA services has been executed.

Upon concurrence by the CNA Reviewer of the CNA Provider's final report (signature of Reviewer and Underwriter required), the CNA Recipient will promptly satisfy and pay the remaining 50 percent balance of the base Contract amount and additional services if they are paid for out of the reserve account. Any remaining fees and/or dues owed to the CNA Provider pursuant to the terms of the Agreement will also be due upon the CNA Reviewer's concurrence of the CNA Provider's final report. Other payments must be subject to the schedule identified in the Agreement.

III. CNA PROVIDER'S OBLIGATIONS – (applies to “as-is” “updates” and “post rehabilitation”)**a. CNA PROVIDER'S RESPONSIBILITY FOR WORK**

The CNA Provider must furnish all necessary labor, materials, tools, equipment, and transportation necessary for performance of the work as described in the Statement of Work, which is attached hereto. The format utilized for this report must be

_____. (Write in “USDA RD CNA Template in Microsoft Excel Format” or similar electronic format.)

b. COMPLIANCE WITH STATEMENT OF WORK

CNA Provider will comply with the Statement of Work by creating and developing a CNA report that will incorporate and meet all terms, conditions and requirements as set forth in the attached Statement of Work.

c. DELIVERY OF PRELIMINARY CNA REPORT

CNA Provider must promptly provide to the CNA Recipient and USDA RD a preliminary CNA report.

d. AVAILABILITY TO DISCUSS CNA REPORT FINDINGS

CNA Provider must take any reasonable measures to be readily available to discuss and respond to any findings, concerns, comments, or revisions the CNA Reviewer may have regarding the preliminary CNA report.

e. SUBMISSION OF FINAL CNA REPORT

After receipt of the CNA Reviewer's report, the CNA Provider must promptly provide the CNA Recipient and USDA RD with a finalized CNA report. The finalized report will incorporate observations, comments and/or changes identified by the CNA Reviewer.

IV. CNA PROVIDER'S CERTIFICATIONS CNA Provider hereby certifies as follows:**a. LICENSING AND COMPLIANCE**

CNA Provider possesses valid and current licenses and certifications necessary to comply with the Statement of Work and as regulated by all applicable State, county, and/or local laws and/or ordinances.

b. CONFLICTS OF INTEREST

CNA Provider has no identity of interest as defined in 7 CFR part 3560 with CNA Recipient or Owner's Property or the management agency/company for the Property.

c. PROPERLY TRAINED

CNA Provider and any Provider personnel who will have actual responsibility for the Property inspection and preparation of the CNA are properly trained and experienced in evaluating site and building systems, health and safety conditions, physical and structural conditions, environmental and accessibility conditions, and estimating costs for repairing, replacing and improving site and building components.

d. PROFESSIONALLY EXPERIENCED

CNA Provider and any Provider personnel who will have actual responsibility for the Property inspection and preparation of the CNA are professionally experienced in preparing and providing CNA's for multifamily housing properties that are similar in scope and operation to those typically financed in USDA RD's Multi-Family Housing program.

e. KNOWLEDGEABLE OF CODES

CNA Provider and any Provider personnel who will have actual responsibility for the Property inspection and preparation of the CNA are knowledgeable about applicable site and building standards and codes, including Federal, State and local requirements on environmental and accessibility issues.

f. DEBARMENT AND SUSPENSION

CNA Provider is not debarred or suspended from participating in Federally assisted programs and will comply with the requirements of 7 C.F.R. part 3017 and 2 C.F.R. part 417 or any successor regulation, pertaining to debarment or suspension of a person from participating in a Federal program or activity.

g. SIGNED CERTIFICATION

Include a written and signed certification by the CNA Provider that it meets all of the above qualifications for the proposed Agreement with the CNA Recipient for CNA services. [The CNA Provider's execution of this Addendum will constitute its "written and signed certification" that it meets these qualifications.]

V. MISCELLANEOUS**a. USDA RURAL DEVELOPMENT PROVISIONS**

Upon request of the CNA Provider or CNA Recipient, USDA RD will make available pertinent project data such as the reserve replacements for the last 2-3 years, budget summary of the last two years, and copies of Physical Inspections and Supervisory Visits for the Property, if available.

b. ASSIGNMENT OF CONTRACT

CNA Provider must not assign or transfer any interest in or performance of this Contract, without written authorization from the CNA Recipient and a USDA RD representative.

c. ENTIRE AGREEMENT

If there are inconsistencies between any provision in this Addendum and any provision in the Agreement, the provision in this Addendum must govern. No oral statements or representations or prior written matter contradicting this instrument must have any force and effect.

d. GOVERNING LAW

All matters pertaining to this Addendum (including its interpretation, application, validity, performance and breach) in whatever jurisdiction action may be brought, must be governed by, construed and enforced in accordance with the laws of the State of _____. (Location of the Property)

e. HEADINGS

This Addendum must be governed by and interpreted as part of the Agreement and its general terms and conditions.

f. TERMS AND CONDITIONS

Except as expressly stated herein, all other terms and conditions of the Agreement must remain in full force and effect.

IN WITNESS WHEREOF, the undersigned who are duly authorized to execute and enter into this Addendum, intending to be legally bound hereby, have executed this Addendum as of the date first written above.

Project:

Project Location:

CNA Recipient

CNA Provider

By its: _____
(Title/Position)

By its: _____
(Title/Position)

Concurred by:

The United States Department of Agriculture, Rural Development

Rural Development Representative

Title/Position

CAPITAL NEEDS ASSESSMENT STATEMENT OF WORK

Nature of the Work

A Capital Needs Assessment (CNA) is a systematic assessment to determine a Property's physical capital needs over the next 20 years based upon the observed current physical conditions of a Property. The CNA report provides a year-by-year estimate of capital replacement costs over this 20-year period for use by the CNA Recipient and the U.S. Department of Agriculture (USDA) Rural Development (RD) personnel in planning the reserve account for replacements and other funding to cover these costs.

*Note: RD will use the CNA report as a key source of information about expected capital needs at the Property and the timing of these needs. However, the CNA report is only an estimate of these needs and their timing. It should **not** be viewed as the formal schedule for actual replacement of capital items. Replacement of capital items should occur when components reach the end of their actual useful life, which may occur earlier or later than estimated in the CNA report.*

Payment

The CNA Recipient must pay the CNA Provider 50 percent of the negotiated Contract amount for the base CNA Contract amount once the Contract for CNA services has been executed. If the CNA Recipient chooses to include and pay for additional services from the CNA Provider exceeding the negotiated base CNA Contract amount, then these services must be listed and the payment method addressed in the Contract between the CNA Recipient and CNA Provider. If funds for additional services will be withdrawn from the reserve account, then 50 percent of the base Contract amount along with the additional services will be paid once the Contract for CNA services has been executed.

Upon concurrence by the CNA Reviewer of the CNA Provider's final report (signature of Reviewer and Underwriter required), the CNA Recipient will promptly satisfy and pay the remaining 50 percent balance of the base Contract amount and additional services if they are paid for out of the reserve account. Any remaining fees and/or dues owed to the CNA Provider pursuant to the terms of the Agreement will also be due upon the CNA Reviewer's concurrence of the CNA Provider's final report. Other payments must be subject to the schedule identified in the Agreement.

Qualifications

The CNA Provider must:

1. Possess valid and current licenses and certifications necessary to comply with the Statement of Work and as regulated by all applicable State, county and/or local laws and/or ordinances.

2. Have no identity of interest as defined in 7 C.F.R. part 3560, with CNA Recipient or owner's Property, or management agent. An architectural firm performing a CNA which is also involved in the rehabilitation of the Property would be considered an Identity of Interest. For example: the Architect that performs the CNA assessment could overstate the conditions of the Property in order to inflate the rehabilitation scope, resulting in an increase to the Architect's compensation which is typically a percentage of the construction costs.
3. Be properly trained and experienced in evaluating site and building systems, health and safety conditions, physical and structural conditions, environmental and accessibility conditions, and estimating costs for repairing, replacing, and improving site and building components. (This applies to the CNA Provider or any Provider personnel who will have actual responsibility for the property inspection and preparation of the CNA.)
4. Be professionally experienced in preparing and providing CNAs for Multi-Family Housing properties that are similar in scope and operation to those typically financed in USDA RD's Section 515 program. (This applies to the CNA Provider or any Provider personnel who will have actual responsibility for the Property inspection and preparation of the CNA.)
5. Be knowledgeable about applicable site and building standards and codes including Federal, State and local requirements on environmental and accessibility issues. (This applies to the CNA Provider or any Provider personnel who will have actual responsibility for the Property inspection and preparation of the CNA.)
6. Not be debarred or suspended from participating in Federally assisted programs and will comply with the requirements of 2 C.F.R. parts 417 and 180 or any successor regulation, pertaining to debarment or suspension of a person from participating in a Federal program or activity.

Statement of Work

The CNA Provider must:

1. Perform a CNA in general conformance with the document: "Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator," except as modified herein.
2. Inspect the property. A minimum of **50 percent** (50 percent if less than 50 units) (45 percent if Property includes 50 – 99 units, 40 percent if the Property contains 100 or more units) of all dwelling units must be inspected in a non-intrusive manner. Consideration must be given to inspecting at least one unit per floor, per building, and per unit type (one-bedroom, two-bedroom, etc.) up to the threshold percentage. CNA Providers must ultimately be responsible for appropriate unit sampling but are encouraged to consult with site representatives to gather adequate information. This will help ensure that unit samples represent a cross-section of unit types and current physical conditions at the Property and are reflective of substantive immediate physical condition concerns.

All site improvements, common facilities (every central mechanical room, every laundry etc.), and building exteriors must be inspected. (ASTM guidelines, allowing for “representative observations” of major elements are not adequate in this regard. Although inspections are “non-intrusive”, CNA Providers must include an inspection of crawlspaces and attics (when these spaces can be reasonably and safely accessed) in a number sufficient to formulate an opinion of the condition of those spaces and any work necessary). All units designated as fully accessible for the handicapped must be inspected. The inspection must include interviews with the CNA Recipient, applicant/transferee, management staff, and tenants as needed. It must also include consideration of all relevant Property information provided by the CNA Recipient, including:

- Contact information for the client’s representative at Rural Development (Name, address, telephone number, e-mail address, etc.).
- Building-by-building breakdown of units by bedroom count and type (i.e. garden, townhouse, handicap accessible) to aid in selection of units at time of inspection.
- Any available plans or blueprints of development (as-built drawings preferred).
- Listing of capital expenditures for the Property over the past three to five years and maintenance expenditures over the last 12 months.
- Maintenance logs to help identify any significant or systemic areas of concern.
- Copies of invoices for any recently completed capital improvements and/or copies of quotes for any pending/planned capital improvements.
- A valid/current Section 504 Accessibility Self-Evaluation/Transition Plan (**no more than three years old**).
- Any available capital/physical needs assessments (CNAs/PNAs) that were previously completed.
- Any available structural or engineering studies that were previously completed.
- Any available reports related to lead-based paint testing or other environmental hazards (i.e. asbestos, mold, underground storage tanks, etc.) that were previously completed and/or related certifications if environmental remediation has been completed.
- Reports including but not limited to: local Health Department inspections, soils analysis, USDA’s last Civil Rights compliance review, USDA’s last security inspection.
- If the CNA Recipient certifies that: (a) third-party funds have been committed for use in the transaction for which the CNA is required; and (b) USDA RD has communicated its acceptance or acknowledgement of the availability of these funds (whether by an award of points in a portfolio revitalization program or otherwise); and (c) these funds are to be used towards a rehabilitation at the Property, the CNA Recipient will provide the CNA Provider with a copy of the proposed rehabilitation scope and budget. Attachment J provides more rehabilitation requirements.

3. Prepare a report using forms developed by Rural Development or other similar documents. The report must be on an electronic worksheet in excel format commonly used in the industry, or as prescribed elsewhere herein. The report must contain the following components, at a minimum:
 - a. Project Summary. Identification of the CNA Provider and CNA Recipient, and a brief description of the project, including the name, location, occupancy type (family/elderly) and unit mix.
 - b. Narrative. A detailed narrative description of the Property, including year the property was constructed or rehabilitated (of each phase if work completed in multiple phases), interior and exterior characteristics, conditions, materials and equipment, architectural and structural components, mechanical systems, etc. it must also include:
 - i. Number, types, and identification of dwelling units inspected and used as a basis for the findings and conclusions in the report;
 - ii. An assessment of how the Property meets the requirements for accessibility to persons with disabilities;
 - a) The report must include any actions and estimated costs necessary to correct deficiencies in order for the Property to comply with applicable Federal, State, and local laws and requirements on Section 504 accessibility. The report must also include an opinion on the adequacy of any existing and approved Transition Plans for the Property in accordance with USDA RD requirements. CNA Providers must not assume that a Property built in accordance with accessibility standards prevailing at the time of original construction is “grandfathered” on accessibility requirements.
 - b) The CNA Provider must include in the final report an accessibility evaluation in accordance with all applicable Federal accessibility requirements and standards. CNA Providers are strongly encouraged to review Appendix 5 to HB-2-3560.
 - iii. An assessment of observed or potential on-site environmental hazards (e.g., above or below ground fuel storage tanks, leaking electrical transformers);

Note: The narrative portion of the report must address and include any existing testing results for the presence of radon, lead in water, lead-based paint, and other environmental concerns. CNA Providers are not expected to conduct or commission any testing themselves. However, where test results provided by the CNA Recipient affirmatively point to hazards, the CNA Provider must inquire about subsequent remediation steps and include cost allowances for any identified hazards not yet remediated.
- iv. Recommendations for any additional professional reports as deemed necessary by the CNA Provider, such as additional investigations on potential structural defects or environmental hazards;

Note: The narrative portion of the report must address each study or report necessary; why, and what expertise is needed so that the CNA Recipient can alleviate that issue, including estimates for repairs, prior to underwriting. It is not the CNA Provider's responsibility to estimate the cost of the study or repairs/ remediation necessary.

- v. Needs of the Property funded or to be funded from a third-party (if any), such as tax credits, including a brief description of the work, the source of funding, the year(s) the work is planned to be completed, and the total estimated costs in current dollars; and:

Note: For projects where the CNA Recipient advises the CNA Provider that third-party funding for rehabilitation is committed and the work will begin within 12 months, the CNA must address the existing conditions at the Property, and the "post-rehabilitation" needs at the Property. An example would be a CNA Recipient who has submitted a pre-application to Rural Development for the Multifamily Preservation and Revitalization (MPR) Demonstration Program where Rural Development has awarded points to the application for third-party funding, and it has committed third-party funding. Under the MPR, a CNA Recipient who has applied for third-party funding for rehabilitation but does not have a commitment for this funding must have the CNA prepared based on conditions at the Property "as is," not "post rehabilitation". In these cases, consult with Rural Development as to whether a "post rehabilitation" CNA should be done. When a CNA Recipient receives the funding commitment, and rehabilitation is planned within the next 12 months, the CNA Contract must be renegotiated to indicate that rehabilitation is planned and specify that a "post rehabilitation" CNA should be prepared.

In preparing CNAs for these properties, the CNA Provider should undertake the CNA on the basis that the third-party funded rehabilitation will occur as described in the Scope of Work for the rehabilitation project provided by the CNA Recipient and determine the Property's "post-rehabilitation" capital needs over the next 20 years. In these cases, the CNA Provider is expected to review and understand the Scope of Work for planned rehabilitation funded from third-party sources, but aside from apparent substantive omissions is not required to comment on the planned rehabilitation.

If there is no evidence that third-party funding for rehabilitation has been committed (e.g., if rehabilitation is not indicated in the Rural Development MPR pre-application and/or Rural Development has not awarded points for it), then the CNA Provider must verify with the Rural Development contact prior to performing a "post rehabilitation" CNA. If no funds are committed, and Rural Development does not agree to a "post-rehabilitation" CNA, the CNA Provider may note the CNA Recipient's rehabilitation proposal in the CNA but the report must be undertaken as though there will be no immediate rehabilitation. In these cases, the CNA must be based on the CNA Provider's independent professional opinion of current and future needs at the Property. (For example, if the CNA Recipient wishes for a rehabilitation, but has no funds allocated to perform one.)

- vi. Acknowledgments (names and addresses of persons who: performed the inspection, prepared the report, and were interviewed during, or as part of the inspection).
- c. Materials and Conditions. This component must be reported on a Microsoft Office Excel © worksheet. The following major system groups must be assessed in the report: Site; Architectural; Mechanical and Electrical; and Dwelling Units. **ALL** materials and systems in the major groups must be assessed (not every specific material used in the construction of the Property), including the following items:
 - i. Item Description;
 - ii. Expected Useful Life (EUL). Data entries must be based on the EUL Table included in the “Fannie Mae Physical Needs Assessment Guidance to the Property Evaluator”, unless otherwise explained in the report based upon the installation or most recent replacement date, quality, warranty, degree of maintenance or any other reasonable and documentable basis. Any EUL entry that varies from the Table must include an explanation in the “Comments” column. Any EUL that varies from the table by 25 percent or more must be adequately supported separately from spreadsheet (for example, provide the documentation or explanation in the Narrative section);
 - iii. Age. The actual age of the material or system;
 - iv. Remaining Useful Life (RUL). Any RUL entry that varies from the difference between the EUL and age must be explained in the “Comments” column. Any RUL entry that varies 2 years or more must be adequately supported separately from the spreadsheet (for example, provide the documentation or explanation in the “Narrative” section). Variances of more than 25 percent will not be accepted;
 - v. Condition. The current physical condition (excellent – good – fair – poor) of the material or system;
 - vi. Description of action needed (repair – replace – maintain construct – none); and,
 - vii. Comments or field notes that are relevant to the report.
- d. Capital Needs. This component must be reported on a Microsoft Office Excel © worksheet. This component identifies all materials and systems for each of the four major system groups to be repaired, replaced, or specially maintained. It must include the following items for such materials or systems:
 - i. Year or years when action is needed;
 - ii. Number of years to complete the needed action (duration of the repair work);
 - iii. Quantity and Unit of Measure. Any data entry that is not from a physical Property measurement or observation during the inspection must be explained in the report (contrary to ASTM guidance, lump sum allowances must be used only for capital projects, such as landscaping, that cannot readily be quantified); and,
 - iv. Estimated repair, replacement, or special maintenance unit cost and total cost in current (un-inflated) dollars for each line item. The report must identify the source(s) used for the cost data. Entries must include estimated costs for materials, labor (union or non-union wages, as appropriate), overhead & profit.

Consultant fees, and other associated costs may be incurred by the CNA Recipient when repair or replacement work involves extensive capital activities (e.g., a major landscaping or site drainage project). These activities are likely to include design costs, or the involvement of general contractors, with associated overhead and profit considerations. If the CNA Provider anticipates work will be affected by these cost factors, notes should be added to the CNA spread sheet/report to explain the cost logic. Discussions with the CNA Recipient and the Agency will be necessary to confirm the proposed cost of these capital activities. CNA Providers using such standard cost sources must use cost allocations that include overhead and profit.

Note: An estimated unit cost that is significantly different from an industry standard cost, such as R.S. Means or equivalent, must be adequately supported.

Generally, replacement actions must involve “in-kind” materials, unless a different material is more appropriate, approved by the State Historic Preservation Office, if applicable, and explained in the report. Exceptions must be made for components that are seen as inadequate (e.g. twenty gallon water heaters, prompting resident complaints) or below contemporary design/construction standards (e.g. single-glazed windows in temperate climates). Rural Development also encourages the consideration of alternative technology and materials that offer the promise of reduced future capital and/or operating costs (more durable and/or less expensive to maintain over time, reduce utility expenses, etc.). CNA Providers are not expected to conduct quantitative cost-benefit analyses but must use sound professional judgment in this regard.

In addition to the exceptions described in the paragraph above, Rural Development may consider the inclusion of market-comparable amenities/upgrades (e.g. air conditioning in warm climates) proposed by the CNA Recipient when such features are essential to the successful operational and financial performance of the Property. Such items should be identified specifically in the CNA report as “CNA Recipient - recommended upgrades” and include an explanation of why these upgrades are necessary in supporting the financial and operational performance of the Property. Where included, CNA Provider comments on the feasibility and appropriateness of the upgrade are required.

v. The capital needs must be presented in two time frames:

a) Immediate Capital Needs. All critical health and safety deficiencies (e.g. inoperative elevator or central fire alarm system, missing/unsecured railings, blocked/inadequate fire egress, property-wide pest infestation) requiring corrective action in the immediate calendar year. Separately, the CNA Recipient must provide any repairs, replacements, and improvements currently being accomplished in a rehabilitation project, regardless of funding source, and anticipated to be completed within 12 months.

The CNA Recipient will include the budget for any planned rehabilitation (e.g., rehabilitation proposed in the CNA Recipients pre-application to the MPR). CNA Provider can, but is not required, to offer comments about the rehabilitation budget. The CNA must not include minor, inexpensive repairs or replacements that are part of a prudent CNA Recipients operating budget. (If the aggregate cost for a material line item is less than \$1,000, then the line item must not be included in the CNA.

An aggregate cost for a line item is an item which needs to be replaced in any given year, the cost exceeds the \$1,000, and the item should be replaced in the one-year duration. **Applying a duration that exceeds one-year may decrease the aggregate amount below the \$1,000 threshold, thus circumventing the intent of the threshold to include a particular item in the CNA.**

Where immediate rehabilitation is proposed by the CNA Recipient using third-party funds, the CNA Provider must note the current condition and remaining effective useful lives of affected systems and components in an “as is” CNA.

b) Capital Needs over the Term. Such capital needs include significant maintenance, repairs, and replacement items required during subsequent twenty calendar years to maintain the Property’s physical integrity and long term marketability. It must include repairs, replacements, and significant deferred maintenance items currently being planned and anticipated to be completed after the immediate calendar year and corrections for violations of applicable standards on environmental and accessibility issues. It must also include the needs described in paragraph 3.b.v. above in the appropriate year(s), if any, if these will not be completed within 12 months from the closing of the program revitalization transaction. The CNA must **not** include minor, inexpensive repairs or replacements that are part of a prudent Property owner’s operating budget. (If the aggregate cost for a material line item is less than \$1,000, then the line item must not be included in the CNA. An aggregate cost for a line item is an item which needs to be replaced in any given year, the cost exceeds the \$1,000, and the item should be replaced in the one-year duration. Applying a duration that exceeds one-year may decrease the aggregate amount below the \$1,000 threshold, thus circumventing the intent of the threshold to include a particular item in the CNA.

Exceptions to these exclusions may be appropriate for very small properties, and/or for low cost items that may affect resident health and safety (e.g., a damaged or misaligned boiler flue). For example, in small projects (total of 12 units or less), items exempted would be for material line items less than \$250, not \$1,000. The report must be realistic and based on due diligence and consideration of the Property’s condition, welfare of the tenants, and logical construction methods and techniques. The estimated unit costs and total costs to remedy the detailed needs must be provided in current (un-inflated) dollars.

Capital Needs over the term must be based on the actual remaining useful lives of the components and systems at hand. Aside from formal work that is accounted for in the “Immediate Capital Needs” section, capital activities must not be “front-loaded.”

Note: New components or upgrades addressed in a Property's rehabilitation may have long-term capital needs implications as well. Those items with expected useful lives of less than twenty years (e.g. air conditioners) also will need to be accounted for in Capital Needs over the Term.

- e. Executive Summary. This component must be reported on a MicrosoftOffice Excel © worksheet. It must include:
 - i. Summary of Immediate Capital Needs – the grand total cost of all majorsystem groups (in current dollars);
 - ii. Summary of Capital Needs Over the Term – the annual costs and grand totalcost of all major system groups (in current and inflated dollars). The inflation rate must be 3 percent; and,
 - iii. Summary of All Capital Needs – the grand total costs for the immediate and over the term capital needs (in current and inflated dollars). The grand total costs (in current and inflated dollars) per dwelling unit must also be included.
 - f. Appendices. This component must include a minimum 25 color digital photographs that describe: the Property's buildings (interior and exterior) and other facilities, specific material or system deficiencies, and the bathrooms and kitchens in the units accessible for the handicapped. Include a Property location map and other documentsas appropriate to describe the Property and support the findings and summaries in the report. The CNA Provider must provide some sort of visual documentation for each line item that cannot be clearly identified by a written description alone. For instance,if an entrance needs to become handicap accessible, a picture of the entrance will helpthe CNA Recipient understand where the construction should take place. The CNA Recipient needs to be able to associate reserve account funds with the correct line items during the life of the CNA during the underwriting process.
4. Deliver the following:
 - a. A minimum of one electronic copy of the report must be delivered on a compact disk, or other acceptable electronic media, e.g. e-mail, to both the CNA Recipientand USDA RD for their review and written acceptance. To the greatest extent possible, delivery must be made within 15 business days of execution of the Agreement with the CNA Recipient.
 - b. If the report is not acceptable, the CNA Provider must make the appropriate changesin accordance with the review comments. A minimum of one electronic Excel copyof the revised report must be delivered on a compact disk or via e-mail to both the CNA Recipient and USDA RD for their review and written acceptance. The delivery must be made within 5 business days of receiving the review comments.
 - c. If the revised report is still not acceptable, additional revisions will be made andelectronic Excel copies delivered on compact disks or via e-mail to the CNA Recipient and USDA RD until the report is acceptable.
 5. Be available for consultation with the CNA Recipient or USDA RD after writtenacceptance of the report on any of its contents.

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6. The CNA Provider must **NOT** analyze the adequacy of the Property's existing or proposed replacement reserve account nor its deposits as a result of the capital needs described in the report.

FANNIE MAE PHYSICAL NEEDS ASSESSMENT GUIDANCE TO THE PROPERTY EVALUATOR

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Intended Uses within the Rural Rental Housing and Farm Labor Housing Programs Related to:

1. Transfer of Project Ownership;
2. Loan Reamortization;
3. Loan Write-Down; or
4. Development of an Equity Loan Incentive or Equity Loan for a Sale to a Non-Profit Sponsor.
5. Facility Rehabilitation, including MPR
6. New Construction

Introduction

While many factors affect the soundness of a mortgage loan over time, one of the most significant is the physical condition of the Property – past, present and future. A prudent lender must be concerned with the past maintenance and improvements because they may indicate owner and management practices as well as expenses to be incurred in the future. The lender must be concerned with the condition of the Property at the time the loan is made, and over the term of the loan, because Property conditions may directly impact marketability to prospective tenants and the need for major expenditures may impact the economic soundness and value of the Property. The lender must also be concerned with the condition of the Property at the end of the loan term. If the Property has deteriorated, the owner may not be able to secure sufficient financing to pay off the loan at maturity.

Most lenders have always given some attention to physical conditions and needs of properties in their underwriting. However, the amount of attention, the data secured, the quality and analysis of that data, and the impact of this information on underwriting has varied widely. Indeed, many properties and the loans that they secure are now in trouble because of inadequate consideration of physical needs in the underwriting coupled with inadequate attention to Property maintenance which has diminished the marketability and overall value of the Property.

The guidance and forms in this package, together with the guidance provided to our lenders in our Delegated Underwriting and Servicing (DUS) and Multifamily Guides, is based upon a desire to see a more standardized approach to assessing the physical needs of properties that will be securing our loans. These documents attempt to respond to stated desires on the part of our lenders for a “level playing field” among competing lenders who may otherwise have different notions of the level of data and analysis required to assess a Property’s physical condition. They also attempt to respond to the needs of Property evaluators who, desiring to produce the quantity and quality of information deemed necessary, need specific guidance to avoid the appearance of glossing over problems or providing material which is too detailed or complex to be usable by the underwriters.

These documents are meant to provide useful guidance and tools to the evaluators. They cannot cover all situations and are not meant to be inflexible. They are designed to elicit the judgment of the evaluator (in a format which is useful to the underwriter), not to substitute for it. We welcome comments from evaluators in the field offices, as we did in developing this package, on improving either our forms or guidance so that this package can best serve the needs of both the evaluators and our lenders. If you have such comments, please contact:

April LeClair
Director of Multifamily Product Management
3900 Wisconsin Avenue, N.W.
Washington, D.C. 20016
(202) 752-7439.

Specific Guidance to the Property Evaluator

The purpose of the Physical Needs Assessment is to identify and provide cost estimates for the following key items:

- Immediate Physical Needs - repairs, replacements and significant maintenance items which should be done immediately.
- Physical Needs Over the Term - repairs, replacements and significant maintenance items which will be needed over the term of the mortgage and two years beyond.

As part of the process, instances of deferred maintenance are also identified.

The assessment is based on the evaluator's judgment of the actual condition of the improvements and the expected useful life of those improvements. It is understood that the conclusions presented are based upon the evaluator's professional judgment and that the actual performance of individual components may vary from a reasonably expected standard and will be affected by circumstances which occur after the date of the evaluation.

This package explains how to use the set of forms provided by Fannie Mae. It is important to recognize that the forms are intended to help the evaluator conduct a comprehensive and accurate assessment. They also present the results of that assessment in a relatively standard format which will be useful to the lender in making underwriting decisions. However, the forms should not constrain the evaluator from fully presenting his or her concerns and findings. The forms should be used and supplemented in ways which facilitate the preparation and presentation of information useful to the lender regarding the physical needs of the Property.

The Systems and Conditions forms may be altered and/or computerized to serve the evaluators' needs so long as information is provided on the condition and Effective Remaining Life (ERL) of all components and the ERL is compared to the standard Expected Useful Life (EUL). The Summary forms may also be extended or computerized so long as the basic format is maintained.

Terms of Reference Form

The lender completes this form for the evaluator. It serves as a reference point for the assessment and provides the evaluator with basic information about the property and the term of the loan.

Four additional topics are covered:

- *Sampling Expectations* - The lender's expectations about the number and/or percentage of dwelling units, buildings and specialized systems to evaluate may be stated. If there is no stated expectation, the evaluator should inspect sufficient units, buildings, and numbers of specialized systems to state *with confidence* the present and probable future condition of each system at the Property. The evaluator should provide a separate statement indicating the sampling systems used to ensure a determination of conditions and costs with acceptable accuracy. If a sampling Expectation is provided by the lender which is not adequate to achieve the requisite level of confidence, the evaluator should so advise the lender.

Considerations in determining an adequate sample size are age and number of buildings (especially if the Property was developed in phases), total number of units, and variations in size, type and occupancy of units. Effective sampling is based on observing a sufficient number of each significant category. Using the above criteria, categories could include *buildings by age of each building* (e.g. inspect buildings in the 8-year old phase and in the 11-year old phase), *buildings by type* (e.g. rowhouse, L-shaped rowhouse, walkup, elevator) and/or *buildings by construction materials* (e.g. inspect the garden/flat roof/brick walls section and the garden/pitched roof/clapboard walls section). Dwelling units are separate categories from buildings. At a minimum, sampling is by unit size (0/1/2/3/4 bedrooms). There may be further categories if units are differently configured or equipped, or have different occupants (especially family or elderly). Generally, we would expect the percentage of units inspected to decrease as the total number of units increases. Systems which are not unit specific, such as boilers, compactors, elevators and roofs, will often have a 100 percent sample.

The overriding objective: SEE ENOUGH OF EACH UNIT TYPE AND SYSTEM TO BE ABLE TO STATE WITH CONFIDENCE THE PRESENT AND PROBABLE FUTURE CONDITION.

- *Market Issues* - In certain instances, market conditions may necessitate action on certain systems. Examples are early appliance replacement or re-carpeting, new entry paving, special plantings, and redecorated lobbies. If the owner or lender has identified such an action, the evaluator should include a cost estimation for such action and indicate what, if any, other costs would be eliminated by such action.
- *Work In Progress* - In some instances, work may be underway (which can be observed) or under contract. When known by the lender, this will be noted. For purposes of the report, such work should be assumed to be complete, unless observed to be unacceptable in quality or scope.

- *Management-Reported Replacements* - In some instances, the Property ownership or management will provide the lender with information about prior repairs or replacements which have been completed in recent years. The lender may provide this information to the evaluator to assist in the assessment of these components. The evaluator should include enough units, buildings, or systems in the sample to reasonably verify thereported repairs or replacements.

Systems and Conditions Forms

It is the responsibility of the evaluator to assess the condition of every system which is present at a Property. All conditions, except as noted below, requiring action during the life of the loan must be addressed regardless of whether the action anticipated is a capital or operating expense.

To assist evaluators in reviewing all systems at a Property, four Systems and Conditions Forms are provided. Each lists a group of systems typically related by trade and/or location. The four forms are Site, Architectural, Mechanical and Electrical, and Dwelling Units. While the forms have several columns in which information may be recorded, *in many instances only the first three columns will be completed*. If the condition of a system is acceptable, the ERL exceeds the term of the mortgage by two years, and no action is required, no other columns need to be completed.

The report is not expected to identify minor, inexpensive repairs or other maintenance items which are clearly part of the Property owner's current operating pattern and budget so long as these items appear to be taken care of on a regular basis. Examples of such minor operating items are occasional window glazing replacement and/or caulking, modest plumbing repairs, and annual boiler servicing. However, the evaluator *should* comment on such items in the report if they do not appear to be routinely addressed or are in need of immediate repair.

The report is expected to address infrequently occurring "big ticket" maintenance items, such as exterior painting, all deferred maintenance of any kind, and repairs or replacements which normally involve significant expense or outside contracting. While the evaluator should note any environmental hazards seen in the course of the inspection, environment-related actions, such as removal of lead-based paint, will be addressed in a separate report prepared by an environmental consultant.

Using the Systems and Conditions Forms

Purpose

The forms can be used both to record actual observations at a specific location and for an overall summary. For example, the Architectural form can be used for a specific building (or group of identical buildings) as well as for summarizing all information for buildings at a Property. The same is true for the Dwelling Unit form. An unlabeled form is included which can be used as a second page for any of the Systems and Conditions Forms.

In some instances, the evaluator will note components which, while they may continue to be functional, may reduce marketability of the Property. For example, single-door refrigerators or appliances in outmoded colors may have such an impact in some properties. The evaluator should note these items, discuss them with the lender, and provide separate estimates of the cost to replace such items if requested.

Items EUL

Each of the four forms has a number of frequently-occurring systems and components listed. This list represents only the most frequently observed and is not meant to be all inclusive.

Every system present at the Property must be observed and recorded. Any system not listed on the form may be included in the spaces labeled “Other”. Note that the assessment includes the systems and components in both residential and non-residential structures. Thus, garages, community buildings, management and maintenance offices, cabanas, pools, commercial space, and other non-residential buildings and areas are included.

The EUL figure which appears in parentheses after the “Item” is taken from the “Expected Useful Life Table” provided. This table provides standard useful lives of many components typically found in apartment complexes. Where the parentheses do not contain a number, it is because there are various types of similar components with differing economic lives. The evaluator should turn to the “Expected Useful Life Table” and select, and insert, the appropriate EUL number. If the EUL will, without question, far exceed the term of the mortgage plus two years, the EUL number need not be inserted.

Note: It is recognized that the “Expected Useful Life Table” represents only one possible judgment of the expected life of the various components. If we receive substantial material to the effect that one or more of the estimates are inappropriate, we will make adjustments. Until such changes are made, the Tables provide a useful and consistent standard for all evaluators to use. They avoid debate on what the appropriate expected life is and permit focus on the evaluator’s judgment of the effective remaining life of the actual component in place, as discussed below.

Age

The evaluator should insert the actual Age of the component or may insert “OR” for original. If the actual age is unknown, an estimate is acceptable. If there is a range in Age (for example, components replaced over time), the evaluator may note the range (i.e., 5-7 years) or may use several lines for the same system, putting a different Age of that system on each line.

Condition

This space is provided to indicate the Condition of the component, generally excellent, good, fair, or poor, or a similar and *consistent* qualitative evaluation.

Effective Remaining Life

This space is provided for the evaluator to indicate the remaining life of the component as is. For standard components with standard maintenance, the “Expected Useful Life Table” provided by the lender could be used to determine ERL by deducting the Age from EUL. However, this should not be done automatically. A component with unusually good original quality or exceptional maintenance could have a longer life. On the other hand, if the component has been poorly maintained or was of below standard original quality, the useful life could be shorter than expected. *The evaluator applies his or her professional judgment in making a determination of the ERL.*

If the ERL is longer than the term of the loan plus two years, no deferred maintenance exists, and no action needs to be taken during the life of the loan, no other columns need to be filled out. The only exception may be Diff? (Difference), as discussed below. This should be noted when the evaluator’s estimate of the ERL varies by more than two years from the standard estimate.

Diff? (Difference)

The Age of the component should be deducted from the EUL in parentheses and the answer compared to the ERL estimated by the evaluator. Where there is a difference of over two years, the evaluator should insert a footnote number in the DIFF? (Difference) column and supply, in an attached list of footnotes, a brief statement of why, in his or her judgment, the ERL of the component varies from the standard estimate. This approach provides consistency among evaluators while making best of the evaluators’ professional judgment.

Action

If any Action is required - immediately, over the life of the loan or within two years thereafter - the Action should be recorded as repair, replace or maintain. Repair is used when only a part of an item requires action, such as the hydraulics and/or controls of a compactor. Replace is used when the entire item is replaced. Maintain is used where special, non-routine maintenance is required, such as the sandblasting of a swimming pool. In cases where a repair or maintenance may be needed now, and replacement or further maintenance may be needed later, separate lines may be used to identify the separate actions and timing.

Now?

If the item involves a threat to the immediate health and safety of the residents, clearly affects curb appeal, will result in more serious problems if not corrected, or should otherwise be accomplished as part of an immediate repair, maintenance or replacement program, this space should be checked. Replacements which may be needed in year one, but do not require immediate attention, need not be checked.

Deferred Maintenance (DM)

The DM space is marked in any instances where current management practice is clearly inadequate and the owner's attention should be called to the item, even if no major expenditure or significant labor may be required.

Quantity

For items requiring action, the evaluator should note the "Quantity" of the system, with the applicable unit of measure entered (each, unit, square feet, square yards, linear feet, lump sum, etc.).

Field Notes

This space, as well as attachments may be used to record the type of component (16cf, fros. free, Hotpoint), the problem (valves leaking) or other information (consider replacement for marketing purposes, replace 30 percent per year, work in progress, etc.) that the evaluator will need to complete the "Evaluator's Summary".

Sample Form

The following example from the Dwelling Unit Systems and Conditions form illustrates how this form is properly used. The example presumes an 11 story building containing 1 and 2 bedroom units. There are 100 units. The age of the building is 9 years. The term of the proposed loan is 7 years.

ITEM (EUL)	AGE	COND	ERL	DIFF?	ACTION	NOW?	DM?	QUANTITY	NOTES
Countertop/ Sinks (10)	9	EX	10+	1	-	-	-	- ea.	Corian Stainless Steel
Refrigerator (15)	9	Good	6	-	REPL	-	-	100ea	Hot point 16cf. ff 20%/yr @ YR 5
Disposal (5)	0-9	Good	0-5	-	REPL	-		100ea	20%/yr. @ YR 1 OPTE
Bath Fixtures (20)	9	Good	11+	-	-	-	-	-	Dated Looking Repair - Now
Ceiling 04 Stack ()	9	Hater Damage	-	-	Repair	Yes	-	10ea	Plumbing Leak

Countertop/Sinks are 9 years old. (The entry could also be “OR”). Condition is excellent, with an ERL of 10 years. This is significantly different from the anticipated ERL of 1 (a EUL of 10 years minus an Age of 9 years). Therefore, there is a footnote entry “1” in the Diff? (Difference) column. The footnote will indicate that this item is made of an exceptionally durable material (Corian), along with a top quality stainless steel sink. The evaluator’s estimate of an ERL of 10 years + is beyond the term of +2. No capital need would be reported.

Refrigerators are also original, reported as 16 cf frost free Hotpoint. Replacement is expected around the ERL, noted as 20 percent annually and beginning in the fifth year of the loan when the refrigerators are 14 years old.

Disposals range from new to original (Age = 0-9). Twenty percent per year replacements will be needed starting in year 1. The evaluator notes that disposals appear to be replaced as part of the project’s normal operations.

Bath fixtures are original, and in good condition. No replacement is expected to be required during the term +2 years. The Notes indicates that they are “dated looking,” which may prompt a market consideration for replacement.

Ceiling is a special entry. The “04” stack of units has experienced water damage to ceiling from major plumbing leak. This is noted for repair NOW. As this apparently occurs in all 10 units in this stack and; therefore, is likely to have more than a modest cost, this action would be reported on the Immediate Physical Needs summary form.

Evaluator’s Summary Forms

Two separate forms are used to summarize the evaluator’s conclusions from the Systems and Conditions Forms. One summarizes Immediate Physical Needs and the other summarizes the Physical Needs Over the Term +2 years.

Evaluator’s Summary: Immediate Physical Needs

All of the items for which NOW? is checked are transferred to this form. This form provides for the listing of Items, Quantity, Unit Cost and Total Cost of each. The Item and Quantity are transferred directly from the Systems and Conditions form.

Unit Cost - This is the cost per unit (sf, ea, lf, etc.) in current dollars to implement the required action. The source of the cost estimate should be listed in a separate attachment. The sources may include a third-party estimation service (e.g., R.S. Means: *Repair and Remodeling Cost Data*), actual bid or Contract prices for the property, estimates from contractors or vendors, the evaluator's own cost files, or published supplier sources.

Total Cost - This is the result of multiplying the quantity times the unit cost. It is expressed in current year dollars.

Deferred Maintenance (DM) - If the item evidence deferred maintenance, this column is checked.

Comments - the comments column, or an attachment, should clearly provide information on the location and the nature of problem being addressed for each item. The information should be adequate for the owner to begin to implement the action.

Evaluator's Summary: Physical Needs Over the Term

Those items not listed on the Immediate Physical Needs form, but for which action is anticipated during the term of the loan plus two years, are listed on the form. The item and Quantity are transferred directly from the Systems and Conditions form. The Unit Cost is calculated in the same manner as on the Immediate Physical Needs form. An attachment should be provided which gives any necessary information on the location of action items and the problem being addressed for each item. The information should be adequate for the owner to begin to implement the action.

Cost by Year - the result of multiplying the quantity times the unit cost, in current dollars, is inserted in the column for the year in which the action is expected to take place. Generally, the ERL estimate provided by the evaluator on the Systems and Conditions will indicate the Action year. For example, if the evaluator has indicated that the ERL of the parking lot paving is 4 years, the cost, in current dollars, is inserted in Year 4. If the items are likely to be done over a number of years, the costs, in current dollars should be spread over the appropriate period. For example, if the ERL of the refrigerators is estimated to be 4 years, or 3-5 years, one third of the cost of replacing the refrigerators may appear in each of years 3, 4, and 5.

Total Uninflated - After inserting all of the appropriate action items, the evaluator should total the items for each year.

Total Inflated - The evaluator should multiply the Total Uninflated times the factor provided to produce the Total Inflated.

Total Inflated All Pages - On the last sheet, the evaluator should include the Total Inflated Dollars for that page and all prior pages.

Cumulative Total All Pages - On the last sheet, the evaluator should insert the Total Inflated Dollars of that year and all prior years.

Special Repair and Replacement Requirements

While performing a Property Inspection, the evaluator must be aware that certain building materials and construction practices may cause properties to experience (or to develop in a short time period) problems that can be corrected only with major repairs or replacements. The following identifies some specific construction related problems; however, the evaluator must be aware that other construction related problems may be found in any Property and should be identified. If any of the following requirements are not met or if the evaluator determines that the following conditions (or others) are present, *the evaluator must contact the lender immediately to discuss the timing as well as the cost of the repairs or replacements*. The evaluator should ensure that any of these conditions are thoroughly addressed in the Physical Needs Assessment.

Minimum Electrical Capacity - Each apartment unit must have sufficient electrical capacity (amperage) to handle the number of electrical circuits and their use within an apartment. Therefore, the evaluator must determine, based on referencing the National Electric Code as well as local building codes, what is the minimum electrical service needed. In any event, that service must not be less than 60 amperes.

Electrical Circuit Overload Protection - All apartment unit circuits, as well as electrical circuits elsewhere in an apartment complex, must have circuit breakers as opposed to fuses as circuit overload protection.

Aluminum Wiring - In all cases, where aluminum wiring runs from the panel to the outlets of a unit, the evaluator's inspection should ascertain that the aluminum wiring connections (outlets, switches, appliances, etc.) are made to receptacles rated to accept aluminum wiring or that corrective repairs can be done immediately by the owner.

Fire Retardant Treated Plywood - While performing the roof inspection, the evaluator should investigate whether there is any indication that fire-retardant treated plywood was used in the construction of the roof (primarily roof sheathing). This inspection should focus on sections of the roof that are subjected to the greatest amount of heat (e.g., areas that are not shaded or that are poorly ventilated) and; if possible, to inspect the attic for signs of deteriorating fire-retardant treated plywood or plywood that is stamped with a fire rating.

Our concern is that certain types of fire-retardant treated plywood rapidly deteriorates when exposed to excessive heat and humidity or may cause nails or other metal fasteners to corrode. Common signs of this condition include a darkening of the wood and the presence of a powder-like substance, warping of the roof and the curling of the shingles. Fire-retardant treated plywood is most likely to be in townhouse properties or other properties with pitched, shingled roofs that were constructed after 1981 and that are located in States east of the Mississippi River and some southwestern States.

Narrative Conclusion and Attachments

A complete narrative summary of the Property and its components is not required. However, the evaluator should supply a concise summary of the conclusions reached concerning the overall condition of the Property, its future prospects, and the quality of the current maintenance programs. *Any items affecting the health and safety of residents should be clearly flagged.*

The summary should include a discussion of the sampling approach used, discussed above, and any market issues which the evaluator believes it may be appropriate to address or which were noted by the lender.

The narrative, the forms use and the attachments (footnotes explaining Differences, information regarding sources of costs, and, if necessary, information needed to identify the location and type of problem addressed in the Evaluator's Summary: Physical Needs Over the Term) should be supplied.

Attachment D

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component the user may specify an EUL for the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

**CNA e-
Tool Estimated
Useful Life Table**

Numbering by ASTM 2018-08 Outline							3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	
3				System Description and Observations			
3.1				Overall General Description			
3.2				Site Systems			Need Category
	3.2.1			Topography			
	3.2.2			Storm Water Drainage			Need Item
		3.2.2.1		Catch basins, inlets, culverts	50	50	All items not color coded
		3.2.2.2		Marine or stormwater bulkhead	35	35	are "Component Type"
		3.2.2.3		Earthwork, swales, drainways, erosion controls	50	50	names.
		3.2.2.4		Storm drain lines	50	50	
		3.2.2.5		Stormwater mgmt ponds	50	50	
		3.2.2.6		Fountains, pond aerators	15	15	
	3.2.3			Access and Egress			Need Item
		3.2.3.1		Security gate - lift arm	10	10	
		3.2.3.2		Security gate - rolling gate	15	15	
	3.2.4			Paving, Curbing and Parking			Need Item
		3.2.4.1		Asphalt Pavement	25	25	
		3.2.4.2		Asphalt Seal Coat	5	5	
		3.2.4.3		Concrete Pavement	50	50	
		3.2.4.4		Curbing, Asphalt	25	25	
		3.2.4.5		Curbing, Concrete	50	50	
		3.2.4.6		Parking, Gravel Surfaced	15	15	
		3.2.4.7		Permeable Paving Systems (brick, concrete pavers)	30	30	
		3.2.4.8		Striping and Marking	15	15	
		3.2.4.9		Signage, Roadway / Parking	15	15	

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Numbering by ASTM 2018-08 Outline					Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component					
		3.2.4.10			Carports, wood frame	30	30	
		3.2.4.11			Carports, metal frame	40	40	
	3.2.5				Flatwork (walks, plazas, terraces, patios)			Need item
		3.2.5.1			Asphalt	25	25	
		3.2.5.2			Concrete	50	50	
		3.2.5.3			Gravel	15	15	
		3.2.5.4			Permeable Paving (brick, concrete pavers)	30	30	
	3.2.6				Landscaping and Appurtenances			Need item
		3.2.6.1			Fencing, chain-link	40	40	
		3.2.6.2			Fencing, wood picket	15	20	
		3.2.6.3			Fencing, wood board (≥1"x 6")	20	25	
		3.2.6.4			Fencing, wrought iron	60	60	
		3.2.6.5			Fencing, steel or aluminum	20	25	
		3.2.6.6			Fencing, concrete Masonry unit (CMU)	30	30	
		3.2.6.7			Fencing, PVC	15	20	
		3.2.6.8			Signage, Entrance/Monument	25	25	
		3.2.6.9			Mail Kiosk	15	20	
		3.2.6.10			Retaining Walls, heavy block (50-80 lb)	60	60	
		3.2.6.11			Retaining Walls, reinforced concrete masonry unit (CMU)	40	40	
		3.2.6.12			Retaining Walls, treated timber	25	25	
		3.2.6.13			Storage sheds	30	30	
	3.2.7				Recreational Facilities			Need item
		3.2.7.1			Sport Court- asphalt	25	25	
		3.2.7.2			Sport Court- synthetic	15	20	

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Numbering by ASTM 2018-08 Outline							
System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
		3.2.7.3		Sport Court-hardwood	50	50	
		3.2.7.4		Tot Lot (playground equipment)	10	15	
		3.2.7.5		Tot Lot- lose ground cover	3	5	
		3.2.7.6		Pool Deck	15	15	
		3.2.7.7		Pool/Spa Plastic Liner	8	8	
		3.2.7.8		Pool/Spa pumps and equipment	10	10	
		3.2.7.9		Decks-treated lumber	20	20	
		3.2.7.10		Decks-composite	50	50	
	3.2.8			Site Utilities			
		3.2.8.1		Site Utilities-Water			Need Item
			3.2.8.1.1	Water Mains/Valves	50	50	
			3.2.8.1.2	Water Tower	50	50	
			3.2.8.1.3	Irrigation System	25	25	
		3.2.8.2		Site Utilities-Electric			Need Item
			3.2.8.2.1	Electric distribution center	40	40	
			3.2.8.2.2	Electric distribution lines	40	40	
			3.2.8.2.3	Transformer	30	30	
			3.2.8.2.4	Emergency Generator	25	25	
			3.2.8.2.5	Solar Photovoltaic panels	15	15	
			3.2.8.2.6	Photovoltaic Inverters	10	10	
			3.2.8.2.7	Pole mounted lights	25	25	
			3.2.8.2.8	Ground lighting	10	10	
			3.2.8.2.9	Building Mounted Lighting	10	10	
			3.2.8.2.10	Building Mounted High Intensity Discharge (HID) Lighting	10	20	

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		3.2.8.3		Site Utilities-Gas			Need Item	
			3.2.8.3.1	Gas Main		40	40	
			3.2.8.3.2	Gas Supply Lines		40	40	
			3.2.8.3.3	Site Propane, Storage & Distribution		35	35	
			3.2.8.3.4	Gas lights/fire pits		20	20	
		3.2.8.4		Site Utilities-Sewer				Need Item
			3.2.8.4.1	Sanitary Sewer lines		50	50	
			3.2.8.4.2	Sanitary waste treatment system		40	40	
			3.2.8.4.3	Lift Station		50	50	
		3.2.8.5		Site Utilities-Trash				Need Item
			3.2.8.5.1	Dumpsters		15	15	
			3.2.8.5.2	Compactors (exterior, commercial grade)		20	20	
			3.2.8.5.3	Recycling containers/equipment		15	15	
			3.2.8.5.4	Composting, organic recycling equipment		10	10	
3.3				Building Frame & Envelope				Need Category
	3.3.1			Foundation				Need Item
		3.3.1.1		Slab, reinforced concrete		100	100	
		3.3.1.2		Slab, post tensioned		100	100	
		3.3.1.3		Continuous reinforced concrete footer and CMU stem wall		100	100	
		3.3.1.4		Piers, reinforced concrete footer and CMU pier		100	100	
		3.3.1.5		Piers, treated timber post/pole		40	40	
		3.3.1.6		Foundation Waterproofing		40	40	
		3.3.1.7		Foundation suction, drainage, groundwater, radon gas controls, pumps, sumps, equip. failure alarms		10	10	

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Numbering by ASTM 2018-08 Outline					Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component					
	3.3.2				Building Frame			
		3.3.2.1			Framing System, Floors & Walls			
			3.3.2.1.1		Wood, timbers, dimensioned lumber, laminated beams, trusses	100	100	Need Item
			3.3.2.1.2		Tie downs, clips, braces, straps, hangers, shear walls/panels	75	75	
			3.3.2.1.3		Steel, beams, trusses	100	100	
			3.3.2.1.4		Reinforced concrete	100	100	
			3.3.2.1.5		Reinforced masonry, concrete masonry units (CMUs)	100	100	
			3.3.2.1.6		Solid Masonry (obsolete)	100	100	
		3.3.2.2			Crawl Spaces, Envelope Penetrations			Need Item
			3.3.2.2.1		Sealed crawl space system	40	40	
			3.3.2.2.2		Vents, screens, covers	30	30	
			3.3.2.2.3		Vapor Barrier (VDR) ground or underfloor	30	30	
			3.3.2.2.4		Penetrations, caulking/sealing	15	15	
			3.3.2.2.5		Crawl space, (de)pressurization, fans, pumps, sumps, equipment failure alarms	10	10	
		3.3.2.3			Roof Frame & Sheathing			Need Item
			3.3.2.3.1		Wood frame and board or plywood sheathing	75	75	
			3.3.2.3.2		Tie downs, clips, braces, straps, hangers	75	75	
			3.3.2.3.3		Steel frame and sheet metal or insulated panel sheathing	100	100	
			3.3.2.3.4		Reinforced concrete deck	100	100	
		3.3.2.4			Flashing & Moisture Protection			Need Item
			3.3.2.4.1		Caulking and Sealing	15	15	
			3.3.2.4.2		Concrete/Masonry Sealants	10	10	
			3.3.2.4.3		Wood waterproofing and sealants	10	10	

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Numbering by ASTM 2018-08 Outline						refrigerator.)		
System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
			3.3.2.4.4	Building wraps & moisture resistant barriers	50	50	8	Need Item
			3.3.2.4.5	Paints and stains, exterior				
		3.3.2.5		Attics & Eaves				
			3.3.2.5.1	Screened gable end or soffit Vents	30	30		
			3.3.2.5.2	Roof vents, passive	40	40		
			3.3.2.5.3	Roof Vents, powered	20	20		
		3.2.2.6		Insulation				Need Item
			3.3.2.6.1	Loose fill, fiber glass, cellulose, mineral wool	50	50		
			3.3.2.6.2	Batts, blankets, rolls, fiber glass or mineral wool	60	60		
			3.3.2.6.3	Rigid foam board	60	60		
			3.3.2.6.4	Sprayed foam	60	60		
		3.3.2.7		Exterior Stairs, Rails, Balconies/Porches, Canopies				Need Item
			3.3.2.7.1	Exterior Stairs, wood frame/stringer	30	30		
			3.3.2.7.2	Exterior Stair Tread-wood	15	15		
			3.3.2.7.3	Exterior Stairs-steel frame/stringer	40	40		
			3.3.2.7.4	Exterior Stair Tread-metal, concrete filled	20	20		
			3.3.2.7.5	Exterior Stairs, Concrete	50	50		
			3.3.2.7.6	Fire escapes, metal	50	50		
			3.3.2.7.7	Balcony/Porch, wood frame	25	25		
			3.3.2.7.8	Balcony/Porch, steel frame or concrete	40	40		
			3.3.2.7.9	Balcony/Porch, wood decking	20	20		
			3.3.2.7.10	Balcony/Porch, composite decking	50	50		
			3.3.2.7.11	Railings, wood	20	20		
			3.3.2.7.12	Railings, metal	50	50		

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System Description	Overall General Description	Component	Sub-Component					
			3.3.2.7.13		Railings, composite	50	50	
			3.3.2.7.14		Canopy, Concrete	50	50	
			3.3.2.7.15		Canopy, Wood/Metal	40	40	
		3.3.2.8			Exterior Doors & Entry Systems			Need Item
			3.3.2.8.1		Unit Entry Door, Exterior, solid wood/metal clad	25	30	
			3.3.2.8.2		Common Exterior Door, aluminum and glass	30	30	
			3.3.2.8.3		Common Exterior Door, solid wood /metal clad	25	25	
			3.3.2.8.4		Storm/Screen Doors	5	10	
			3.3.2.8.5		Sliding Glass Doors	25	30	
			3.3.2.8.6		French or Atrium Doors, wood/metal clad	25	30	
			3.3.2.8.7		Automatic Entry Doors	30	30	
			3.3.2.8.8		Commercial Entry Systems	50	50	
			3.3.2.8.9		Overhead Door	30	30	
			3.3.2.8.10		Automatic Opener, overhead door	20	20	
	3.3.3				Facades or Curtainwall			Need Item
		3.3.3.1			Sidewall System			
			3.3.3.1.1		Aluminum Siding	40	40	
			3.3.3.1.2		Vinyl Siding	25	25	
			3.3.3.1.3		Cement Board Siding	45	45	
			3.3.3.1.4		Plywood/Laminated Panels	20	20	
			3.3.3.1.5		Exterior Insulation Finishing System (EIFS)	30	30	
			3.3.3.1.6		Stucco, over wire mesh/lath	50	50	
			3.3.3.1.7		Metal/Glass Curtain Wall	40	40	
			3.3.3.1.8		Precast Concrete Panel (tilt-up)	60	60	

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System Description	Overall General Description	Component	Sub-Component					
			3.3.3.1.9		Brick/block veneer	60	60	
			3.3.3.1.10		Stone Veneer	50	50	
			3.3.3.1.11		Glass Block	50	50	
			3.3.3.1.12		Cedar/Redwood shakes, clapboard	50	50	
			3.3.3.1.13		Pine board, clapboard	50	50	
		3.3.3.2			Windows			Need item
			3.3.3.2.1		Wood, (dbl, sgl hung, casement, awning, sliders)	35	45	
			3.3.3.2.2		Wood, fixed pane, picture	40	45	
			3.3.3.2.3		Aluminum	35	40	
			3.3.3.2.4		Vinyl	30	30	
			3.3.3.2.5		Vinyl/Alum Clad Wood	50	50	
			3.3.3.2.6		Storm/Screen Windows	7	15	
	3.3.4				Roofing and Roof Drainage			Need item
		3.3.4.1			Sloped Roofs			
			3.3.4.1.1		Asphalt Shingle	20	20	
			3.3.4.1.2		Metal	50	50	
			3.3.4.1.3		Slate shingle	75	75	
			3.3.4.1.4		Clay/cementitious barrel tile	60	60	
			3.3.4.1.5		Wood Shingle, Cedar Shakes/Shingles	25	25	
		3.3.4.2			Low Slope/Flat Roofs			Need item
			3.3.4.2.1		Low slope-Built-up Roof, with gravel finish	20	20	
			3.3.4.2.2		Low slope-Built-up Roof, no mineral or gravel finish	10	10	
			3.3.4.2.3		Low slope-Adhered rubber membrane, (EPDM)	15	15	
			3.3.4.2.4		Low slope-Thermoplastic membrane, (TPO, vinyl)	15	15	

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System Description	Overall General Description	Component	Sub-Component	Component Description	3 tiers of categorization: Need Category, Need Item, Component Type
			3.3.4.2.5	Low slope-Rubberized/elastomeric white/cool roof	15 15
		3.3.4.3		Roof Drainage, Trim & Accessories	Need Item
			3.3.4.3.1	Gutters/Downspouts, aluminum	20 20
			3.3.4.3.2	Gutters/Downspouts, copper	50 50
			3.3.4.3.3	Low slope-roof drains, scuppers	30 30
			3.3.4.3.4	Soffits, Wood, Vinyl, Metal	20 20
			3.3.4.3.5	Fascia, Wood, Vinyl	20 20
			3.3.4.3.6	Roof Hatch	30 30
			3.3.4.3.7	Service Door	30 30
			3.3.4.3.8	Roof Skylight	30 30
3.4				Mech.-Elect.-Plumbing	Need Category
	3.4.1			Plumbing	
		3.4.1.1		Water Supply and Waste Piping	Need Item
			3.4.1.1.1	PVC/CPVC pipe, supply and waste	75 75
			3.4.1.1.2	Copper/brass hard pipe, supply	75 75
			3.4.1.1.3	Copper Tube, supply	50 50
			3.4.1.1.4	Galvanized pipe, supply	40 40
			3.4.1.1.5	Cast iron sanitary waste	75 75
			3.4.1.1.6	Domestic Cold Water Pumps	20 20
			3.4.1.1.7	Sewage Ejectors	50 50
			3.4.1.1.8	Commercial Sump Pump	20 20
			3.4.1.1.9	Residential Sump Pump	15 15
			3.4.1.1.10	Water Softener/Filtration	15 15
		3.4.1.2		Domestic Water Heating	Need Item

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System Description	Overall General Description	Component	Sub-Component					
			3.4.1.2.1		DHW circulating pumps	15	15	15
			3.4.1.2.2		DHW storage tanks	15	15	15
			3.4.1.2.3		Exchanger, in tank or boiler	15	15	15
			3.4.1.2.4		External tankless heater, gas or electric	20	20	20
			3.4.1.2.5		Solar hot water	20	20	20
			3.4.1.2.6		Residential hot water heater, gas or electric	12	15	15
			3.4.1.2.7		Flue, gas water heaters	35	35	35
			3.4.1.2.8		Boilers, Oil Fired, Sectional	25	25	25
			3.4.1.2.9		Boilers, Gas Fired, Sectional	25	25	25
			3.4.1.2.10		Boilers, Oil/ Gas/ Dual Fuel, Low MBH	30	30	30
			3.4.1.2.11		Boilers, Oil/ Gas/ Dual Fuel, High MBH	40	40	40
			3.4.1.2.12		Boilers, Gas Fired Atmospheric	25	25	25
			3.4.1.2.13		Boilers, Electric	20	20	20
			3.4.1.2.14		Boiler Blowdown and Water Treatment	25	25	25
			3.4.1.2.15		Boiler Room Pipe Insulation	25	25	25
			3.4.1.2.16		Boiler Room Piping	50	50	50
			3.4.1.2.17		Boiler Room Valves	25	25	25
			3.4.1.2.18		Boiler Temperature Controls	15	15	15
			3.4.1.2.19		Heat Exchanger	35	35	35
		3.4.1.3			Fixtures			Need Item
			3.4.1.3.1		Faucets & valves	15	20	20
			3.4.1.3.2		Bath tubs & sinks, cast iron	75	75	75
			3.4.1.3.3		Baths tubs & sinks, enameled or stainless steel, fiberglass	40	40	40
			3.4.1.3.4		Bath tubs & sinks, porcelain	50	50	50

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System Description	Overall General Description	Component	Sub-Component					
			3.4.1.3.5		Toilets/bidets/urinals	40	40	
			3.4.1.3.6		Flush valves	10	15	
			3.4.1.3.7		Tub/shower units or integrated assemblies	30	30	
	3.4.2				Centralized HVAC Systems			
		3.4.2.1			Centralized Heating/Cooling Equipment			Need Item
			3.4.2.1.1		Boilers, Oil Fired, Sectional - Centralized	25	25	
			3.4.2.1.2		Boilers, Gas Fired, Sectional - Centralized	25	25	
			3.4.2.1.3		Boilers, Oil/ Gas/ Dual Fuel, Low MBH - Centralized	30	30	
			3.4.2.1.4		Boilers, Oil/ Gas/ Dual Fuel, High MBH - Centralized	40	40	
			3.4.2.1.5		Boilers, Gas Fired Atmospheric - Centralized	25	25	
			3.4.2.1.6		Boilers, Electric - Centralized	20	20	
			3.4.2.1.7		Boiler Blowdown and Water Treatment - Centralized	25	25	
			3.4.2.1.8		Boiler Room Pipe Insulation - Centralized	25	25	
			3.4.2.1.9		Boiler Room Piping - Centralized	50	50	
			3.4.2.1.10		Boiler Room Valves - Centralized	25	25	
			3.4.2.1.11		Boiler Temperature Controls - Centralized	15	15	
			3.4.2.1.12		Heat Exchanger - Centralized	35	35	
			3.4.2.1.13		Combustion Air, Duct with Fixed Louvers	30	30	
			3.4.2.1.14		Combustion Air, Motor Louvers and Duct	25	25	
			3.4.2.1.15		Combustion Waste Flue	40	40	
			3.4.2.1.16		Cooling tower	25	25	
			3.4.2.1.17		Chilling plant	20	20	
			3.4.2.1.18		Steam supply station	50	50	
			3.4.2.1.19		Free standing chimney	50	50	

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System Description	Overall General Description	Component	Sub-Component					Need Category, Need Item, Component Type	Need Item
		3.4.2.2			Centralized Heat/Air/Fuel Distribution				
			3.4.2.2.1		Fuel oil/propane storage tanks	40	40		40
			3.4.2.2.2		Remediate/remove abandoned tanks/fuel lines	100	100		100
			3.4.2.2.3		Fuel transfer system	25	25		25
			3.4.2.2.4		Gas/oil distribution lines	50	50		50
			3.4.2.2.5		Gas meter	40	40		40
			3.4.2.2.6		2 pipe/4 pipe hydronic distribution-above grade	50	50		50
			3.4.2.2.7		2 pipe/4 pipe hydronic distribution-in ground	25	25		25
			3.4.2.2.8		Hydronic/Water Circulating Pumps	20	20		20
			3.4.2.2.9		Hydronic/Water Controller	20	20		20
			3.4.2.2.10		Radiation-steam/hydronic (baseboard or freestanding radiator)	50	50		50
			3.4.2.2.11		Fan Coil Unit, Hydronic	30	30		30
			3.4.2.2.12		Central exhaust fans/blowers	20	20		20
	3.4.3				Decentralized and Split HVAC Systems				
		3.4.3.1			Dwelling/Common Area HVAC Equipment				Need Item
			3.4.3.1.1		Electric heat pump, condenser, pad or rooftop	15	15		15
			3.4.3.1.2		Electric AC condenser, pad or rooftop	15	15		15
			3.4.3.1.3		Electric furnace/air handler	20	20		20
			3.4.3.1.4		Gas furnace/air handler	20	20		20
			3.4.3.1.5		Hydronic heat/electric AC air handler	25	25		25
			3.4.3.1.6		Hydronic feed electric heat pump/air handler	25	25		25
			3.4.3.1.7		Wall mounted electric/gas heater	25	25		25
			3.4.3.1.8		Electric baseboard heater	30	30		30
			3.4.3.1.9		PTAC Thruwall (packaged terminal air conditioning)	15	15		15

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System Description	Overall General Description	Component	Sub- Component	Component Description				
			3.4.3.1.10	Window or thru-wall air conditioners		10	10	
			3.4.3.1.11	Package HVAC roof top		15	15	
			3.4.3.1.12	Air filtration/humidity control devices (humidifiers, HRV's)		20	20	
			3.4.3.1.13	Duct, rigid sheet metal, insulated if not in conditioned space		35	35	
			3.4.3.1.14	Duct, flexible, insulated		20	20	
			3.4.3.1.15	Duct, sealing-mastic or UL 181A or 181B tape.		20	20	
			3.4.3.1.16	Diffusers, registers		20	20	
			3.4.3.1.17	Fireplace, masonry & firebrick, masonry chimney		75	75	
			3.4.3.1.18	Fireplace, factory assembled		35	35	
			3.4.3.1.19	Fireplace insert, stove		50	50	
			3.4.3.1.20	Chimneys, metal, and chimney covers		35	35	
		3.4.3.2		HVAC Controls				Need Item
			3.4.3.2.1	Dwelling/common area thermostat		15	20	
			3.4.3.2.2	Heat sensors		15	15	
			3.4.3.2.3	Outdoor temperature sensor		10	10	
	3.4.4			Electrical				
		3.4.4.1		Electric Service & Metering				Need Item
			3.4.4.1.1	Building service panel		50	50	
			3.4.4.1.2	Building meter		40	40	
			3.4.4.1.3	Tenant meters, meter panel		40	40	
		3.4.4.2		Electrical Distribution				Need Item
			3.4.4.2.1	Tenant electrical panel		50	50	
			3.4.4.2.2	Unit/building wiring		50	50	
		3.4.4.3		Electric Lighting & Fixtures				Need Item

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System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly
			3.4.4.3.1	Switches & outlets	35	35
			3.4.4.3.2	Lighting - exterior entry	15	20
			3.4.4.3.3	Lighting- interior common space	25	30
			3.4.4.3.4	Lighting - Tenant Spaces	20	25
			3.4.4.3.5	Door bells, chimes	20	25
		3.4.4.4		Telecommunications Equipment		
			3.4.4.4.1	Satellite dishes/antennae	20	20
			3.4.4.4.2	Telecom panels & controls	20	20
			3.4.4.4.3	Telecom cabling & outlets	20	20
3.5				Vertical Transportation		
	3.5.1			Elevators/Escalators		
		3.5.1.1		Electrical switchgear	50	50
		3.5.1.2		Electrical wiring	30	30
		3.5.1.3		Elevator controller, call, dispatch, emergency	10	20
		3.5.1.4		Elevator cab, interior finish	10	20
		3.5.1.5		Elevator cab, frame	35	50
		3.5.1.6		Elevator, machinery	20	30
		3.5.1.7		Elevator, shaftway doors	10	20
		3.5.1.8		Elevator, shaftway hoist rails, cables, traveling	20	25
		3.5.1.9		Elevator, shaftway hydraulic piston and leveling	20	25
		3.5.1.10		Escalators	50	50
3.6				Life Safety/Fire Protection		
	3.6.1			Sprinklers and Standpipes		
		3.6.1.1		Building fire suppression sprinklers, standpipes	50	50

**CNA e-
Tool Estimated
Useful Life Table**

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component type but must enter an EUL for the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

Numbering by ASTM 2018-08 Outline								
System Description	Overall General Description	Component	Sub-Component	Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type	
		3.6.1.2		Fire pumps	20	20		
		3.6.1.3		Fire hose stations	50	50		
		3.6.1.4		Fire extinguishers	10	15		
	3.6.2			Alarm, Security & Emergency Systems			Need Item	
		3.6.2.1		Tenant space alarm systems	10	15		
		3.6.2.2		Residential smoke detectors		5	7	
		3.6.2.3		Call station	10	15		
		3.6.2.4		Emergency/auxiliary generator	25	25		
		3.6.2.5		Emergency/auxiliary fuel storage tank	25	25		
		3.6.2.6		Emergency lights, illuminated signs		5	10	
		3.6.2.7		Smoke and fire detection system, central panel	15	15		
		3.6.2.8		Buzzer/intercom, central panel	20	20		
		3.6.2.9		Tenant buzzer / intercom /secured entry system	20	20		
	3.6.3			Other Systems			Need Item	
		3.6.3.1		Pneumatic Lines and Controls	30	30		
		3.6.3.2		Auto-securing doors/entries/lock down	30	30		
3.7				Interior Elements				
	3.7.1			Interiors-Common Areas			Need Category	
		3.7.1.1		Finished walls, ceilings, floors			Need Item	
			3.7.1.1.1	Drywall - Common	35	40		
			3.7.1.1.2	Plaster - Common	50	50		
			3.7.1.1.3	Paints, stains, clear finishes, interior - Common	15	20		
			3.7.1.1.4	Wallpapers - Common	15	20		
			3.7.1.1.5	Wall tile, ceramic, glass, natural stone - Common	35	50		

**CNA e-
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Useful Life Table**

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Numbering by ASTM 2018-08 Outline					Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component					
			3.7.1.1.6		Floor tile, ceramic, natural stone - Common	40	50	
			3.7.1.1.7		Concrete/Masonry/Terrazzo - Common	75	75	
			3.7.1.1.8		Hardwood floor (3/4" strip or parquet) - Common	50	50	
			3.7.1.1.9		Wood floor, laminated/veneered - Common	20	25	
			3.7.1.1.10		Resilient tile or sheet floor (vinyl, linoleum) - Common	15	20	
			3.7.1.1.11		Carpet - Common	6	10	
			3.7.1.1.12		Acoustic tile/drop ceiling - Common	15	20	
		3.7.1.2			Milwork (doors, trim, cabinets, tops)			Need Item
			3.7.1.2.1		Interior, hollow core doors - Common	20	25	
			3.7.1.2.2		Interior doors, solid core, wood, metal clad, fire rated	30	35	
			3.7.1.2.3		Door trim - Common	20	30	
			3.7.1.2.4		Wall trim (base, chair rail, crown moldings) - Common	30	35	
			3.7.1.2.5		Passage & lock sets - Common	15	20	
			3.7.1.2.6		Bifold & sliding doors - Common	15	20	
			3.7.1.2.7		Cabinets & vanities - Common	20	25	
			3.7.1.2.8		Tops, granite, natural stone, engineered stone - Common	50	50	
			3.7.1.2.9		Tops, solid surface, stainless steel - Common	40	50	
			3.7.1.2.10		Tops, plastic laminates, wood - Common	15	25	
			3.7.1.2.11		Vanity tops, cultured marble, molded acrylic, fiber glass - Common	25	35	
		3.7.1.3			Appliances			Need Item
			3.7.1.3.1		Refrigerator/freezer - Common	15	15	
			3.7.1.3.2		Range, cook top, wall oven - Common	20	25	
			3.7.1.3.3		Range hood - Common	20	25	
			3.7.1.3.4		Microwave - Common	10	10	

**CNA e-
Tool Estimated
Useful Life Table**

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component type but must enter an explanation in the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

Numbering by ASTM 2018-08 Outline					
System Description	Overall General Description	Component	Sub-Component	Component Description	3 tiers of categorization: Need Category, Need Item, Component Type
			3.7.1.3.5	Disposal (food waste) - Common	7 10
			3.7.1.3.6	Compactors (interior, residential grade) - Common	7 10
			3.7.1.3.7	Dishwasher - Common	10 15
			3.7.1.3.8	Clothes washer/dryer - Common	10 15
		3.7.1.4		Specialties	Need Item
			3.7.1.4.1	Interior Mail Facility	20 25
			3.7.1.4.2	Common area bath accessories (towel bars, grab bars, toilet stalls, etc.)	7 12
			3.7.1.4.3	Mirrors & medicine cabinets - Common	20 25
			3.7.1.4.4	Closet/storage specialties, shelving - Common	20 25
			3.7.1.4.5	Common area interior stairs	50 50
			3.7.1.4.6	Common area railings	15 25
			3.7.1.4.7	Bath/kitchen vent/exhaust fans - Common	15 15
			3.7.1.4.8	Ceiling fans - Common	15 15
			3.7.1.4.9	Window treatments, drapery rods, shades, blinds, etc. - Common	15 25
			3.7.1.4.10	Indoor recreation and fitness equipment	10 15
			3.7.1.4.11	Entertainment centers, theatre projection and seating	15 25
	3.7.2			Interiors-Dwelling Units	Need Category
		3.7.2.1		Finished walls, ceilings, floors	Need Item
			3.7.2.1.1	Drywall	35 40
			3.7.2.1.2	Plaster	50 50
			3.7.2.1.3	Paints, stains, clear finishes, interior	10 15
			3.7.2.1.4	Wallpapers	10 15
			3.7.2.1.5	Wall tile, ceramic, glass, natural stone	30 40
			3.7.2.1.6	Floor tile, ceramic, natural stone	40 50

**CNA e-
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Numbering by ASTM 2018-08 Outline					Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component					
			3.7.2.1.7		Concrete/Masonry/Terrazzo	75	75	
			3.7.2.1.8		Hardwood floor (3/4" strip or parquet)	50	50	
			3.7.2.1.9		Wood floor, laminated/veneered	15	20	
			3.7.2.1.10		Resilient tile or sheet floor (vinyl, linoleum)	15	20	
			3.7.2.1.11		Carpet	6	10	
			3.7.2.1.12		Acoustic tile/drop ceiling	15	20	
		3.7.2.2			Millwork (doors, trim, cabinets, tops)			Need Item
			3.7.2.2.1		Interior, hollow core doors	20	25	
			3.7.2.2.2		Interior doors, solid core, wood, metal clad	30	35	
			3.7.2.2.3		Door trim	20	30	
			3.7.2.2.4		Wall trim (base, chair rail, crown moldings)	25	35	
			3.7.2.2.5		Passage & lock sets	12	20	
			3.7.2.2.6		Bifold & sliding doors	12	20	
			3.7.2.2.7		Cabinets & vanities	20	25	
			3.7.2.2.8		Tops, granite, natural stone, engineered stone	50	50	
			3.7.2.2.9		Tops, solid surface, stainless steel	40	50	
			3.7.2.2.10		Tops, plastic laminates, wood	15	25	
			3.7.2.2.11		Vanity tops, cultured marble, molded acrylic, fiber glass	25	35	
		3.7.2.3			Appliances			Need Item
			3.7.2.3.1		Refrigerator/freezer	12	15	
			3.7.2.3.2		Range, cook top, wall oven	15	25	
			3.7.2.3.3		Range hood	15	25	
			3.7.2.3.4		Microwave	10	10	
			3.7.2.3.5		Disposal (food waste)	7	10	

This table lists the recommended average useful life of the categories of assets that should be considered in a Capital Needs Assessment. If an observed item is not listed, it should be assigned to the most closely related category. The Standard EUL for a component type is fixed. The user may estimate the Remaining Useful Life of any existing component independent of the Standard EUL by entering the assessed RUL in the appropriate space on the Components tab of the Excel Assessment Tool and by justifying the assessed RUL in the adjacent comment box. When identifying an alternative to an existing component type but must enter an EUL for the alternative which differs from the Standard EUL for that component type but must enter an explanation in the Notes space on the Alternatives tab of the Tool. Each specific component assessed is given a free-form description by the needs assessor and this description is the "component ID" or component name which may be more specific than the "Component Type", e.g (a particular kind, size, etc of refrigerator, not just any refrigerator.)

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Useful Life Table**

Numbering by ASTM 2018-08 Outline						3 tiers of categorization: Need Category, Need Item, Component Type		
System Description	Overall General Description	Component	Sub- Component	Component Description	Family	Elderly		
			3.7.2.3.6	Compactors (interior, residential grade)	7	10		
			3.7.2.3.7	Dishwasher	10	15		
			3.7.2.3.8	Clothes washer/dryer	10	15		
		3.7.2.4		Specialties			Need Item	
			3.7.2.4.1	Bath accessories (towel bars, grab bars, etc.)	7	12		
			3.7.2.4.2	Mirrors & medicine cabinets	15	25		
			3.7.2.4.3	Closet/storage specialties, shelving	15	25		
			3.7.2.4.4	Interior stairs	50	50		
			3.7.2.4.5	Stair and loft railings	20	25		
			3.7.2.4.6	Bath/kitchen vent/exhaust fans	15	15		
			3.7.2.4.7	Ceiling fans	10	15		
			3.7.2.4.8	Window treatments, drapery rods, shades, blinds, etc.	10	20		
4				Additional Considerations			Need Category	
	4.1			Environmental items (not elsewhere defined)			Need Item	
		4.1.1		Environmental remediation alarms	5	5		
		4.1.2		Environmental remediation pumps & equipment	5	5		
		4.1.3		Mold-treat-remediate	100	100		
		4.1.4		Pest Control/Integrated Pest Management Plan	1	1		
	4.2			Lead based paint (LBP), asbestos			Need Item	
		4.2.1		LBP inspection	100	100		
		4.2.2		Lead based paint abatement				
			4.2.2.1	LBP encapsulation (abatement)	20	20		
			4.2.2.2	LBP removal	100	100		
		4.2.3		Lead based paint interim controls				

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Numbering by ASTM 2018-08 Outline					Component Description	Family	Elderly	3 tiers of categorization: Need Category, Need Item, Component Type
System Description	Overall General Description	Component	Sub-Component					
		4.2.3.1			LBP hazard interim control	6	6	
		4.2.3.2			LBP Encapsulation (Interim control)	6	6	
	4.2.4				Asbestos			
		4.2.4.1			Asbestos encapsulation (abatement)	10	10	
		4.2.4.2			Asbestos Removal	100	100	
4.3					Commercial Tenant Improvements			Need Item
	4.3.1				Owner provided item(s) (specify)	5	5	
	4.3.2				Owner provided \$ allowance (specify)	5	5	

CAPITAL NEEDS ASSESSMENT REPORT

	GENERAL NOTES:
A	Reviews of preliminary Capital Needs Assessment (CNA) reports should be based on: <ol style="list-style-type: none"> 1. The Statement of Work referenced in the written Agreement with the Provider. 2. Rural Development case file, such as property records and inspection reports. 3. Latest available cost data published by RS Means. 4. Rural Development guidelines. 5. Fannie Mae guidelines.
B	The reviewer should give special attention to the line items with the highest total costs.
C	The reviewer should be careful to note whether all systems or components that should be included have indeed been included in the report.
D	If all review items are answered "YES", the Provider should be advised to finalize the CNA with no or only a few minor changes.
E	Any review items answered "NO" should be explained in writing to the Provider in sufficient detail for clarity and appropriate actions taken.
F	The final report should be reviewed to verify that any minor changes and items answered with a "NO" in the first review have been satisfactorily addressed or corrected.
G	When item "D" is completed, the CNA Reviewer should advise the appropriate Rural Development official that the CNA should be accepted as the final report.

	REVIEW ITEMS:	PRIMARY BASIS *	YES	NO
1	Is the report in the required format?	1		
2	Does the report fully describe the property?	1		
3	Are photographs provided to generally describe the property's buildings and other facilities?	1		
4	Does the report identify who performed the on-site inspection?	1		
5	Does the report identify who prepared the report?	1		
6	Was an adequate number of dwelling units inspected?	1		
7	Is the length of the study period adequate?	1		
8	Is the list of property components complete?	5		
9	Is the list divided into the appropriate major system groups?	1		
10	Are the existing property components accurately described?	2		
11	Are the expected useful lifetimes of the components reasonably accurate?	5		
12	Are the reported ages of the components reasonably accurate?	2		
13	Is the current condition of each component accurately noted?	2		
14	Are the effective remaining lifetimes of components correctly calculated?	5		
15	Are proposed corrective actions appropriately identified?	1		
16	Are critical immediate repairs appropriately identified?	1		
17	Are items being replaced with "in-kind" materials when appropriate?	1		

18	Are the component quantities reasonably accurate?	2		
19	Are photographs provided to describe deficiencies?	1		
	REVIEW ITEMS:	PRIMARY BASIS *	YES	NO
20	Does the report adequately address environmental hazards and other relevant environmental issues?	1		
21	Does the report adequately address accessibility issues?	1		
22	Does the report address any existing accessibility transition plans and their adequacy?	1		
23	Are photographs provided to describe existing kitchens and bathrooms in the fully accessible units?	1		
24	Are the proposed years for repair or replacement reasonable?	5		
25	Are the repair/replacement durations appropriate and reasonable?	5		
26	Are the detailed estimated repair and replacement costs calculated in current dollars?	1		
27	Are the estimated repair and replacement costs reasonable?	3		
28	Are the sources for cost data explained in the report?	1		
29	Is the projected inflation rate appropriate?	1		
30	Have the costs in current and inflated dollars been totaled for each year?	1		
31	Have the costs for each year and grand totals been correctly calculated?	5		
32	Does the data in the report narrative and summary charts match?	5		
33	Does the report exclude routine maintenance, operation, and low cost expenses?	4		
34	Does the report include all deficiencies known to Rural Development?	2		
35	Does the report include all other relevant data or information known to Rural Development?	2		

SAMPLE CAPITAL NEEDS ASSESSMENT REVIEW REPORT

[Review of Preliminary/Final CNA Report]

Property Name and Location:

CNA Provider:

CNA Reviewer:

Date of Preliminary / Final CNA Report:

Date of Review:

Reviewer's Comments:

-
-
-

Purpose / Intended Use / Intended User of Review:

- The purpose of this CNA review assignment is to render an opinion as to the completeness, adequacy, relevance, appropriateness, and reasonableness of the work under review relative to the requirements of Rural Development.
- The intended use of the review report is to help meet Rural Development loan underwriting requirements for permanent financing under the Section 515 MPR demonstration program. The review is not intended for any other use.
- The intended user of the review is only Rural Development.

Scope of Review:

The scope of the CNA review process involved the following procedures:

- The review included a reading/analysis of the following components from the CNA report and the additional due diligence noted. The contents from the CNA work file were not reviewed. The components that were reviewed are:
 - Date of the Report
 - Narrative
 - Description of Improvements
 - Photographs of the Subject Property
 - Capital Needs Summary
 - Systems and Conditions Forms
 - Critical Needs Forms
 - Capital Needs over the Term Forms

- This is a desk review, and the reviewer has not inspected the subject Property.
- The reviewer has/has not confirmed data contained within the CNA report.

Review Conclusion:**In the reviewer's opinion, given the scope of the work under review:**

- The subject CNA *meets/does not meet* the reporting requirements of Rural Development.
- The data *appears/does not appear* to be adequate and relevant.
- The CNA methods and techniques used *are/are not* appropriate.
- The analyses, opinions, and conclusions *are/are not* appropriate and reasonable.
- This is a review report on a *preliminary/final* CNA report. The *preliminary/final* CNA report is subject to review discussions between Rural Development and the CNA Recipient of the subject Property and between the CNA Recipient and the CNA Provider. The CNA Recipient is the CNA Provider's client, and only the client can instruct the CNA Provider to revise the *preliminary/final* report. To be acceptable to Rural Development, the final CNA report should address any errors or deficiencies identified in the *Reviewer's Comments* section of this review report.

CNA PROVIDER TO INSERT IN MEMO FORMAT THEIR WRITTEN REPORT AND THEN HAVE SIGNATURE PAGE BELOW FOR REVIEWER AND UNDERWRITER/LOAN OFFICIAL TO SIGN.

Signed by:

(CNA Reviewer)

(Underwriter / Loan Official)

(Please note: for the CNA Review Report of the preliminary CNA, only the CNA Reviewer needs to sign the report on behalf of Rural Development. For the CNA Review Report of the final CNA, the CNA Reviewer and the Underwriter/Loan Official must sign the report. This is to encourage discussion between the Agencies parties, so that both the CNA Reviewer and the Underwriter are involved in the process of accepting the final CNA for the Property.)

Capital Needs Assessment Guidance to the Reviewer

AGREEMENT TO PROVIDE CAPITAL NEEDS ASSESSMENT

	GENERAL NOTES:
A	Reviews of proposed agreements for Capital Needs Assessments (CNA) should be based on Rural Development and other Rural Development -recognized guidelines.
B	If all review items are answered "NO", the reviewer should advise the appropriate Rural Development official that the Agreement should be accepted.
C	Any review items answered with a "YES" should be explained in writing to the proposed Provider in sufficient detail for clarity and appropriate actions to be taken.
D	If all review items answered with a "YES" are satisfactorily addressed or corrected by the proposed Provider, the reviewer should advise the appropriate Rural Development official that the Agreement should be accepted.
E	If any review items answered with a "YES" cannot be satisfactorily addressed or corrected by the proposed CNA Provider, the reviewer should advise the appropriate Rural Development official that the Agreement should NOT be accepted.

	REVIEW ITEMS:	YES	NO
1	Does the proposed Agreement omit Rural Development's Addendum to CNA Contract?		
2	Does the proposed Agreement omit Rural Development's CNA Statement of Work?		
3	Is there any evidence or indication that the proposed CNA Provider has an identity of interest, as defined in 7 C.F.R. part 3560?		
4	Is there any evidence or indication that the proposed CNA Provider is NOT trained in evaluating site and building systems, and health, safety, physical, structural, environmental and accessibility conditions?		
5	Is there any evidence or indication that the proposed CNA Provider is NOT trained in estimating costs for repairing, replacing, and improving site and building components?		
6	Is there any evidence or indication that the proposed CNA Provider is NOT experienced in providing CNAs for MFH properties that are similar to those in the Section 515 Program?		
7	Is there any evidence or indication that the proposed CNA Provider is NOT knowledgeable of site, building and accessibility codes and standards?		
8	Is there any evidence or indication that the proposed CNA Provider is debarred or suspended from participating in Federally-assisted programs?		
9	Does the proposed fee appear to be unreasonable?		

CAPITAL NEEDS ASSESSMENT REPORT

	GENERAL NOTES:
A	Reviews of preliminary Capital Needs Assessment (CNA) reports should be based on: <ol style="list-style-type: none"> 1. The Statement of Work referenced in the written agreement with the provider 2. Rural Development case file, such as property records and inspection reports 3. Latest available cost data published by RS Means 4. Rural Development guidelines 5. Fannie Mae guidelines
B	The reviewer should give special attention to the line items with the highest total costs.
C	The reviewer should be careful to note whether all systems or components that should be included have indeed been included in the report.
D	If all review items are answered "YES", the Provider should be advised to finalize the CNA with no or only a few minor changes.
E	Any review items answered with a "NO" should be explained in writing to the Provider in sufficient detail for clarity and appropriate actions taken.
F	The final report should be reviewed to verify that any minor changes and items answered with a "NO" in the first review have been satisfactorily addressed or corrected.
G	When item "D" is completed, the CNA Reviewer should advise the appropriate Rural Development official that the CNA should be accepted as the final report.

	REVIEW ITEMS:	PRIMARY BASIS *	YES	NO
1	Is the report in the required format?	1		
2	Does the report fully describe the property?	1		
3	Are photographs provided to generally describe the property's buildings and other facilities?	1		
4	Does the report identify who performed the on-site inspection?	1		
5	Does the report identify who prepared the report?	1		
6	Was an adequate number of dwelling units inspected?	1		
7	Is the length of the study period adequate?	1		
8	Is the list of property components complete?	5		
9	Is the list divided into the appropriate major system groups?	1		
10	Are the existing property components accurately described?	2		
11	Are the expected useful lifetimes of the components reasonably accurate?	5		
12	Are the reported ages of the components reasonably accurate?	2		
13	Is the current condition of each component accurately noted?	2		
14	Are the effective remaining lifetimes of components correctly calculated?	5		
15	Are proposed corrective actions appropriately identified?	1		
16	Are critical immediate repairs appropriately identified?	1		
17	Are items being replaced with "in-kind" materials when appropriate?	1		

18	Are the component quantities reasonably accurate?	2		
19	Are photographs provided to describe deficiencies?	1		
	REVIEW ITEMS:	PRIMARY BASIS *	YES	NO
20	Does the report adequately address environmental hazards and other relevant environmental issues?	1		
21	Does the report adequately address accessibility issues?	1		
22	Does the report address any existing accessibility transition plans and their adequacy?	1		
23	Are photographs provided to describe existing kitchens and bathrooms in the fully accessible units?	1		
24	Are the proposed years for repair or replacement reasonable?	5		
25	Are the repair/replacement durations appropriate and reasonable?	5		
26	Are the detailed estimated repair and replacement costs calculated in current dollars?	1		
27	Are the estimated repair and replacement costs reasonable?	3		
28	Are the sources for cost data explained in the report?	1		
29	Is the projected inflation rate appropriate?	1		
30	Have the costs in current and inflated dollars been totaled for each year?	1		
31	Have the costs for each year and grand totals been correctly calculated?	5		
32	Does the data in the report narrative and summary charts match?	5		
33	Does the report exclude routine maintenance, operation, and low-cost expenses?	4		
34	Does the report include all deficiencies known to Rural Development?	2		
35	Does the report include all other relevant data or information known to Rural Development?	2		

Joaquin Altoro,
Administrator, Rural Housing Service.
 [FR Doc. 2022-08515 Filed 4-20-22; 8:45 am]
BILLING CODE 3410-XV-C

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[S-35-2021]

Approval of Subzone Status; All Ways Pacific LLC, Dayton, New Jersey

On March 2, 2021, the Executive Secretary of the Foreign-Trade Zones (FTZ) Board docketed an application submitted by the State of New Jersey Department of State, grantee of FTZ 44, requesting subzone status subject to the existing activation limit of FTZ 44, on behalf of All Ways Pacific LLC, in Dayton, New Jersey.

The application was processed in accordance with the FTZ Act and Regulations, including notice in the

Federal Register inviting public comment (86 FR 13282, March 8, 2021). The FTZ staff examiner reviewed the application and determined that it meets the criteria for approval. Pursuant to the authority delegated to the FTZ Board Executive Secretary (15 CFR 400.36(f)), the application to establish Subzone 44O was approved on April 18, 2022, subject to the FTZ Act and the Board's regulations, including Section 400.13, and further subject to FTZ 44's 407.5-acre activation limit.

Dated: April 18, 2022.

Andrew McGilvray,
Executive Secretary.

[FR Doc. 2022-08528 Filed 4-20-22; 8:45 am]

BILLING CODE 3510-DS-P

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

Visiting Committee on Advanced Technology

AGENCY: National Institute of Standards and Technology, Department of Commerce.

ACTION: Notice of open meeting.

SUMMARY: National Institute of Standards and Technology (NIST)'s Visiting Committee on Advanced Technology (VCAT or Committee) will meet on Tuesday, June 14, 2022, from 8:30 a.m. to 5:00 p.m. Eastern Time, and Wednesday, June 15, 2022, from 8:30 a.m. to 12:00 p.m. Eastern Time.

DATES: The VCAT will meet on Tuesday, June 14, 2022, from 8:30 a.m. to 5:00 p.m. and Wednesday, June 15, 2022, from 8:30 a.m. to 12:00 p.m. Eastern Time.

ADDRESSES: The meeting will be held at the National Cybersecurity Center of Excellence, 9700 Great Seneca Highway, Rockville, Maryland, 20850 for the VCAT members and NIST Senior Leadership with an option to participate via webinar for NIST staff and public participants. Please note admittance instructions under the **SUPPLEMENTARY INFORMATION** section of this notice.

FOR FURTHER INFORMATION CONTACT: Stephanie Shaw, VCAT, NIST, 100 Bureau Drive, Mail Stop 1060, Gaithersburg, Maryland 20899–1060, telephone number 240–446–6000. Ms. Shaw's email address is stephanie.shaw@nist.gov.

SUPPLEMENTARY INFORMATION:

Authority: 15 U.S.C. 278, as amended, and the Federal Advisory Committee Act, as amended, 5 U.S.C. app.

Pursuant to the Federal Advisory Committee Act, as amended, 5 U.S.C. app., notice is hereby given that the VCAT will meet on Tuesday, June 14, 2022, from 8:30 a.m. to 5:00 p.m. Eastern Time, and Wednesday, June 15, 2022, from 8:30 a.m. to 12:00 p.m. Eastern Time. The meeting will be open to the public. The VCAT is composed of not fewer than 9 members appointed by the NIST Director, eminent in such fields as business, research, new product development, engineering, labor, education, management consulting, environment, and international relations. The primary purpose of this meeting is for the VCAT to review and make recommendations regarding general policy for NIST, its organization, its budget, and its programs within the framework of applicable national policies as set forth by the President and the Congress. The agenda will include an update on major programs at NIST. It will also include updates and discussions on strategic issues facing the agency including: Diversity, Equity, Inclusion, and Accessibility; implications of the Bipartisan Innovation Act; and other topics. The agenda may change to accommodate Committee business. The final agenda will be posted on the NIST website at <http://www.nist.gov/director/vcat/agenda.cfm>.

Individuals and representatives of organizations who would like to offer comments and suggestions related to the Committee's business are invited to request a place on the agenda. Approximately one-half hour will be reserved for public comments and speaking times will be assigned on a first-come, first-serve basis. The amount of time per speaker will be determined by the number of requests received, but is likely to be about 3 minutes each. The

exact time for public comments will be included in the final agenda that will be posted on the NIST website at <http://www.nist.gov/director/vcat/agenda.cfm>. Questions from the public will not be considered during this period. Speakers who wish to expand upon their oral statements, those who had wished to speak but could not be accommodated on the agenda, and those who were unable to attend via webinar are invited to submit written statements to Stephanie Shaw at stephanie.shaw@nist.gov.

All NIST staff and public participants will be attending via webinar and must contact Ms. Shaw at stephanie.shaw@nist.gov by 5:00 p.m. Eastern Time, Monday, June 6, 2022 for detailed instructions on how to join the webinar.

Alicia Chambers,

NIST Executive Secretariat.

[FR Doc. 2022–08476 Filed 4–20–22; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Socioeconomics of Coral Reef Conservation

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general public and other Federal agencies to comment on proposed and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on January 25, 2021 (86 FR 6876) during a 60-day comment period and again on April, 16, 2021 (86 FR 20120) during a 30-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Oceanic & Atmospheric Administration (NOAA), Commerce.

Title: Socioeconomics of Coral Reef Conservation, Guam 2023 Survey.

OMB Control Number: 0648–0646.

Form Number(s): None.

Type of Request: Regular, new information collection for an existing control number.

Number of Respondents: 800.

Average Hours per Response: 20 minutes (0.33 hours).

Total Annual Burden Hours: 267 hours.

Needs and Uses: This request is for a new information collection under the currently approved hybrid-generic information collection under OMB Control Number 0648–0646. The information collection is part of the National Coral Reef Monitoring Program (NCRMP), which was established by the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program (CRCP) under the authority of the Coral Reef Conservation Act of 2000. The CRCP was created to safeguard and ensure the welfare of the coral reef ecosystems along the coastlines of America's states and territories. In accordance with its mission goals, NOAA developed a survey to track relevant information regarding each jurisdiction's population, social and economic structure, the benefits of coral reefs and related habitats, the impacts of society on coral reefs, and the impacts of coral management on communities. The survey is repeated in each jurisdiction every five to seven years in order to provide longitudinal data and information for managers to effectively conserve coral reefs for current and future generations.

The purpose of this information collection is to obtain human dimensions information from residents in Guam. Specifically, NOAA is seeking information on the behaviors and activities related to coral reefs, as well as information on perceptions of coral reef conditions and attitudes toward specific reef conservation activities. The survey has a core set of questions that are the same for all jurisdictions to allow for information to be tracked over time. To account for geographical, cultural and linguistic differences between jurisdictions, the survey questions include items that are specific to the local context and developed based on jurisdictional partner feedback.

We intend to use the information collected through this survey instrument for research purposes, as well as for measuring and improving the results of our reef protection programs. Because many of our efforts to protect reefs rely on education and changing attitudes toward reef protection, the information collected will allow CRCP to ensure that programs are designed appropriately at the start, future

program evaluation efforts are as successful as possible, and outreach efforts are targeting the intended recipients with useful information.

Affected Public: Individuals or households.

Frequency: Every 5–7 years.

Respondent's Obligation: Voluntary.

Legal Authority: Coral Reef Conservation Act of 2000.

This information collection request may be viewed at www.reginfo.gov. Follow the instructions to view the Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting “Currently under 30-day Review—Open for Public Comments” or by using the search function and entering either the title of the collection or the OMB Control Number 0648–0646.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2022–08489 Filed 4–20–22; 8:45 am]

BILLING CODE 3510–JS–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB972]

Marine Fisheries Advisory Committee; Charter Renewal

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of renewed charter.

SUMMARY: Notice is hereby given of the 2-year renewed charter for the Marine Fisheries Advisory Committee (MAFAC), signed on April 12, 2022.

FOR FURTHER INFORMATION CONTACT: Heidi Lovett, Assistant Federal Program Officer, MAFAC, 301–427–8034; email heidi.lovett@noaa.gov.

SUPPLEMENTARY INFORMATION: As required by section 10(a)(2) of the Federal Advisory Committee Act, 5 U.S.C. App. (1982), and after consultation with the General Services Administration, the Secretary of Commerce has determined that the renewal of the charter for MAFAC is in the public interest. MAFAC was

established by the Secretary of Commerce (Secretary) on February 17, 1971, to advise the Secretary on all living marine resource matters that are the responsibility of the Department of Commerce. This Committee advises and reviews the adequacy of living marine resources policies and programs to meet the needs of commercial and recreational fisheries, aquaculture, seafood trade, environmental, consumer, academic, tribal, governmental, and other national interests. The Committee's charter must be renewed every 2 years from the date of the last renewal.

The Committee will function solely as an advisory body and in compliance with provisions of the Federal Advisory Committee Act. Copies of the Committee's revised Charter have been filed with the appropriate committees of the Congress and with the Library of Congress. The charter can be accessed online at <https://www.fisheries.noaa.gov/national/partners/marine-fisheries-advisory-committee-charter>.

Dated: April 15, 2022.

Jennifer L. Lukens,

Federal Program Officer, Marine Fisheries Advisory Committee, National Marine Fisheries Service.

[FR Doc. 2022–08503 Filed 4–20–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB951]

Advisory Committee Open Session on Management Strategy Evaluation for Atlantic Bluefin Tuna

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of meeting.

SUMMARY: NMFS is holding a public meeting via webinar session for the Advisory Committee to the U.S. Section to the International Commission for the Conservation of Atlantic Tunas (ICCAT) and all interested stakeholders to receive an update and provide input on the development of the management strategy evaluation (MSE) for Atlantic bluefin tuna.

DATES: A virtual meeting that is open to the public will be held by webinar session on May 2, 2022, from 11 a.m. to 1 p.m. EDT.

ADDRESSES: Please register to attend the meeting at: <https://forms.gle/>

NTH38FNaF6LY9iEV8. Registration will close on April 29, 2022, at 5 p.m. EDT. Instructions for accessing the webinar session will be emailed to registered participants.

FOR FURTHER INFORMATION CONTACT:

Bryan Keller, Office of International Affairs, Trade, and Commerce, (202) 897–9208 or at Bryan.Keller@noaa.gov.

SUPPLEMENTARY INFORMATION:

MSE is a process that allows fishery managers and stakeholders (e.g., industry, scientists, and non-governmental organizations) to assess how well different strategies achieve specified management objectives for a fishery. After several years of work, ICCAT expects to finalize its bluefin tuna MSE in 2022 and anticipates adopting a management procedure in November 2022 to set Total Allowable Catch (TACs) for 2023 and future years for both the western Atlantic and eastern Atlantic and Mediterranean stocks of bluefin tuna. NMFS and the United States more broadly participate in this MSE development process and have been engaging stakeholders and considering their input throughout the process through various means, including consultation with the Advisory Committee to the U.S. Section to ICCAT. The United States also participates in the development of the bluefin tuna MSE through active engagement by U.S. scientists in ICCAT's Standing Committee on Research and Statistics (SCRS).

The May 2 meeting is intended to update stakeholders and solicit their input on the MSE approach being developed by ICCAT. This includes SCRS progress in developing initial candidate management procedures (CMPs) illustrating potential management tradeoffs and the related process by ICCAT to refine management objectives to assist the SCRS in further refining and narrowing those CMPs. This open session Advisory Committee meeting is primarily informational in nature and intended to increase the opportunity for stakeholder awareness and input on the bluefin tuna MSE process. Discussions at the meeting will help to inform U.S. scientists who are participating in the work of the SCRS, and input provided during the meeting will be considered by the United States to assist its preparations for a 9–10 May 2022 meeting of ICCAT's Panel 2 and other ICCAT bluefin tuna MSE meetings planned for 2022.

Authority: 16 U.S.C. 971 *et seq.*; 16 U.S.C. 1801 *et seq.*

Dated: April 15, 2022.

Alexa Cole,

*Director, Office of International Affairs,
Trade, and Commerce, National Marine
Fisheries Service.*

[FR Doc. 2022-08477 Filed 4-20-22; 8:45 am]

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

Patent and Trademark Office

[Docket No. PTO-P-2022-0016]

Grant of Interim Extension of the Term of U.S. Patent No. 9,364,354; Reducer®

AGENCY: United States Patent and Trademark Office, Department of Commerce.

ACTION: Notice of Interim Patent Term Extension.

SUMMARY: The United States Patent and Trademark Office has issued an order granting interim extension for a one-year interim extension of the term of U.S. Patent No. 9,364,354.

FOR FURTHER INFORMATION CONTACT: Ali Salimi by telephone at (571) 272-0909; by mail marked to his attention and addressed to the Commissioner for Patents, Mail Stop Hatch-Waxman PTE, P.O. Box 1450, Alexandria, VA 22313-1450; by fax marked to his attention at (571) 273-0909; or by email to ali.salimi@uspto.gov.

SUPPLEMENTARY INFORMATION: Section 156 of Title 35, United States Code, generally provides that the term of a patent may be extended for a period of up to five years if the patent claims a product, or a method of making or using a product, that has been subject to certain defined regulatory review, and that the patent may be extended for interim periods of up to one year if the regulatory review is anticipated to extend beyond the expiration date of the patent.

On April 8, 2022, Neovasc Medical Ltd., the patent owner of record, timely filed an application under 35 U.S.C. 156(d)(5) for a third interim extension of the term of U.S. Patent No. 9,364,354. The patent claims the catheter implantable device, Reducer®. The application for patent term extension indicates that a Premarket Approval Application (PMA) P190035 was submitted to the Food and Drug Administration (FDA) on December 31, 2019.

Review of the patent term extension application indicates that, except for permission to market or use the product commercially, the subject patent would be eligible for an extension of the patent term under 35 U.S.C. 156, and that the

patent should be extended for one year as required by 35 U.S.C. 156(d)(5)(B). Because there is a reasonable expectation that the regulatory review period will continue beyond the twice-extended expiration date of the patent, June 6, 2022, a third interim extension of the patent term under 35 U.S.C. 156(d)(5) is appropriate.

A third interim extension under 35 U.S.C. 156(d)(5) of the term of U.S. Patent No. 9,364,354 is granted for a period of one year from the twice-extended expiration date of the patent.

Robert Bahr,

Deputy Commissioner for Patents, United States Patent and Trademark Office.

[FR Doc. 2022-08492 Filed 4-20-22; 8:45 am]

BILLING CODE 3510-16-P

COMMODITY FUTURES TRADING COMMISSION

Renewal of the Market Risk Advisory Committee

AGENCY: Commodity Futures Trading Commission.

ACTION: Notice of renewal.

SUMMARY: The Commodity Futures Trading Commission (Commission) is publishing this notice to announce the renewal of the Market Risk Advisory Committee (MRAC). The Commission has determined that the renewal of the MRAC is necessary and in the public's interest, and the Commission has consulted with the General Services Administration's Committee Management Secretariat regarding the MRAC's renewal.

FOR FURTHER INFORMATION CONTACT: Alicia Lewis, MRAC Designated Federal Officer, at 202-418-5862 or alewis@cftc.gov.

SUPPLEMENTARY INFORMATION: In support of the Commission's mission of promoting the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation as well as the monitoring and management of systemic risk, the MRAC's objectives and scope of activities are to conduct public meetings, advise, and submit reports and recommendations to the Commission on: (1) Systemic issues that impact the stability of the derivatives markets and other related financial markets; and (2) the impact and implications of the evolving market structure of the derivatives markets and other related financial markets. The MRAC will operate for two years from the date of renewal unless the Commission directs that the MRAC terminate on an earlier date. A copy of

the renewal charter will be posted on the Commission's website at www.cftc.gov.

Dated: April 18, 2022.

Christopher Kirkpatrick,

Secretary of the Commission.

[FR Doc. 2022-08540 Filed 4-20-22; 8:45 am]

BILLING CODE 6351-01-P

DEPARTMENT OF DEFENSE

Office of the Secretary

Renewal of Department of Defense Federal Advisory Committees—Defense Innovation Board

AGENCY: Department of Defense (DoD).

ACTION: Renewal of Federal Advisory Committee.

SUMMARY: The DoD is publishing this notice to announce that it is renewing the Defense Innovation Board (DIB).

FOR FURTHER INFORMATION CONTACT: Jim Freeman, DoD Advisory Committee Management Officer, 703-692-5952.

SUPPLEMENTARY INFORMATION: The DIB is being renewed in accordance with the Federal Advisory Committee Act (FACA) (5 U.S.C., appendix) and 41 CFR 102-3.50(d). The charter and contact information for the DIB's Designated Federal Officer (DFO) are found at <https://www.facadatabase.gov/FACA/apex/FACAPublicAgencyNavigation>.

The DIB provides the Secretary of Defense and Deputy Secretary of Defense with independent advice and recommendations to address challenges and accelerate innovation adoption into the culture, technologies, organizational structures, processes, and functions of the DoD. The DIB shall focus on innovative means to address future challenges and accelerate innovation adoption into the culture, technologies, organizational structures, processes, and any other topics raised by the Secretary of Defense or the Deputy Secretary of Defense ("the DoD Appointing Authority") or the Under Secretary of Defense for Research and Engineering (USD(R&E)) unless otherwise provided for by statute or Presidential directive. The DIB is composed of no more than 20 members must possess some or all of the following: (a) A proven track record of sound judgment in leading or governing large, complex private sector corporations or organizations; (b) demonstrated performance in identifying and adopting new technology innovations into the operations of large organizations in either the public or private sector; (c) demonstrated performance in

developing new technology concepts; and (d) a proven track record as a distinguished academic or researcher at an accredited college or institute of higher education. Members will consist of talented, innovative leaders with a diversity of background, experience, and thought in support of the DIB missions.

Individual members are appointed according to DoD policy and procedures, and serve a term of service of one-to-four years with annual renewals. One member will be appointed as Chair of the DIB. No member, unless approved according to DoD policy and procedures, may serve more than two consecutive terms of service on the DIB, or serve on more than two DoD Federal advisory committees at one time.

DIB members who are not full-time or permanent part-time Federal civilian officers or employees, or active duty members of the Uniformed Services, shall be appointed as experts or consultants pursuant to 5 U.S.C. 3109 to serve as special government employee members. DIB members who are full-time or permanent part-time civilian officers or employees, or active duty members of the Uniformed Services, shall be appointed pursuant to 41 CFR 102-3.130(a) to serve as regular employee members.

All members of the DIB are appointed to exercise their own best judgment, without representing any particular point of view, and to discuss and deliberate in a manner that is free from conflict of interest. Except for reimbursement of official DIB-related travel and per diem, members serve without compensation.

The public or interested organizations may submit written statements about the DIB's mission and functions. Written statements may be submitted at any time or in response to the stated agenda of planned meeting of the DIB. All written statements shall be submitted to the DFO for the DIB, and this individual will ensure that the written statements are provided to the membership for their consideration.

Dated: April 15, 2022.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2022-08485 Filed 4-20-22; 8:45 am]

BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Office of the Secretary

Defense Business Board; Notice of Federal Advisory Committee Meeting

AGENCY: Office of the Deputy Secretary of Defense, Department of Defense (DoD).

ACTION: Notice of Federal Advisory Committee meeting.

SUMMARY: The DoD is publishing this notice to announce that the following Federal Advisory Committee meeting of the Defense Business Board ("the Board") will take place.

DATES: Closed to the public Wednesday, May 11, 2022 from 6:00 p.m. to 7:30 p.m. Closed to the public Thursday, May 12, 2022 from 9:15 a.m. to 1:00 p.m. Open to the public Thursday, May 12, 2022 from 1:00 p.m. to 4:20 p.m. All Eastern time.

ADDRESSES: The open and closed portions of the meeting will be in Rooms 4D880 and 4E869 in the Pentagon, Washington, DC. Due to the current guidance on combating the Coronavirus, the public portions of the meeting will be conducted by teleconference only. To participate in the open portion of the meeting, see the Meeting Accessibility section for instructions.

FOR FURTHER INFORMATION CONTACT: Ms. Jennifer Hill, Designated Federal Officer of the Board in writing at Defense Business Board, 1155 Defense Pentagon, Room 5B1088A, Washington, DC 20301-1155; or by email at jennifer.s.hill4.civ@mail.mil; or by phone at 571-342-0070.

SUPPLEMENTARY INFORMATION: This meeting is being held under the provisions of the Federal Advisory Committee Act (FACA) (5 U.S.C., appendix), the Government in the Sunshine Act (5 U.S.C. 552b), and 41 CFR 102-3.140 and 102-3.150.

Purpose of the Meeting: The mission of the Board is to examine and advise the Secretary of Defense on overall DoD management and governance. The Board provides independent, strategic-level, private sector and academic advice and counsel on enterprise-wide business management approaches and best practices for business operations and achieving National Defense goals.

Agenda: The Board meeting will begin in closed session on May 11, 2022 from 6:00 p.m. to 7:30 p.m. Eastern time with opening remarks by Ms. Jennifer Hill, the Designated Federal Officer, followed by a classified briefing from Mr. Mike Brown, Director, Defense

Innovation Unit, on rapid access and adoption of commercial technologies for the DoD that strengthen the national security innovation base. The Board will reconvene in closed session on May 12, 2022 at 9:15 a.m. Eastern time with opening remarks by Ms. Jennifer Hill, the Designated Federal Officer. The Board will then receive classified remarks on the DoD budget with respect to the National Defense Strategy from the Hon. Kathleen Hicks, Deputy Secretary of Defense, followed by a classified briefing from the Hon. John Sherman, DoD Chief Information Officer on the current state of DoD IT. The Board will then receive a classified briefing from Mr. James Baker, Director, Office of Net Assessment (ONA), on ONA's current assessment of global competition and strategic challenges for DoD. The meeting will move into open session beginning at 1:00 p.m. to receive a presentation by Ms. Linnie Haynesworth, Chair, Business Transformation Advisory Subcommittee on the "Executive Analytics for Defense Business Operations" study and a presentation by General Larry Spencer, USAF (Ret), Chair, Talent Management, Culture, & Diversity Advisory Subcommittee on the 'Reskilling/ Upskilling Career DoD Civilians in New and Emerging Technologies' study. The Board members will deliberate and vote on the proposed findings, observations, and recommendations from both studies. The meeting will conclude with closing remarks by the Designated Federal Officer. The latest version of the agenda will be available on the Board's website at: <https://dbb.defense.gov/Meetings/Meeting-May12-2022/>.

Meeting Accessibility: In accordance with Section 10(d) of the FACA and 41 CFR 102-3.155, it is hereby determined that portions of the May 11-12, 2022 meeting of the Board will include classified information and other matters covered by 5 U.S.C. 552b(c)(1) and that, accordingly, the meeting will be closed to the public on May 11, 2022 from 6:00 p.m. to 7:30 p.m. and on May 12, 2022 from 9:15 a.m. to 1:00 p.m. This determination is based on the consideration that it is expected that discussions throughout these periods will involve classified matters of national security. Such classified material is so intertwined with the unclassified material that it cannot reasonably be segregated into separate discussions without defeating the effectiveness and meaning of these portions of the meeting. To permit these portions of the meeting to be open to the public would preclude discussion of such matters and would greatly

diminish the ultimate utility of the Board's findings and recommendations to the Secretary of Defense and to the Deputy Secretary of Defense. Pursuant to section 10(a)(1) of the FACA and 41 CFR 102–3.140, the portion of the meeting on May 12, 2022 from 1:00 p.m. to 4:20 p.m. is open to the public. Persons desiring to attend the public session are required to register. To attend the public session submit your name, affiliation/organization, telephone number, and email contact information to the Board at osd.pentagon.odam.mbx.defense-business-board@mail.mil. Requests to attend the public session must be received no later than 3:00 p.m. on Tuesday, May 10, 2022. Upon receipt of this information, the Board will provide further instructions for telephonically attending the meeting.

Written Comments and Statements: Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the FACA, the public or interested organizations may submit written comments or statements to the Board in response to the stated agenda of the meeting or in regard to the Board's mission in general. Written comments or statements should be submitted to Ms. Jennifer Hill, the Designated Federal Officer, via electronic mail (the preferred mode of submission) at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. The Designated Federal Officer must receive written comments or statements being submitted in response to the agenda set forth in this notice by May 6, 2022 to be considered by the Board. The Designated Federal Officer will review all timely submitted written comments or statements with the Board Chair, and ensure the comments are provided to all members of the Board before the meeting. Written comments or statements received after this date may not be provided to the Board until its next scheduled meeting. Please note that all submitted comments and statements will be treated as public documents and will be made available for public inspection, including, but not limited to, being posted on the Board's website.

Dated: April 15, 2022.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2022–08486 Filed 4–20–22; 8:45 am]

BILLING CODE 5001–06–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OMS–2022–0277; 9780–01–OMS]

Proposed Information Collection Request; Comment Request; Ethnicity, Race, Gender and Disability Self-Identification Form for Nominees Considered for Appointment on Federal Advisory Committees at the U.S. Environmental Protection Agency

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) is planning to submit an information collection request (ICR), Ethnicity, Race, Gender and Disability Self-Identification Form for nominees considered for appointment on federal advisory committees at the Environmental Protection Agency (EPA ICR Number 2717.01, OMB Control Number 2030–NEW) to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act. Before doing so, EPA is soliciting public comments on specific aspects of the proposed information collection as described below. This is a request for approval of a new collection. An agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

DATES: Comments must be submitted on or before June 21, 2022.

ADDRESSES: Submit your comments, referencing Docket ID Number EPA–HQ–OMS–2022–0277; online using www.regulations.gov (our preferred method), by email to Docket_OMS@epa.gov or by mail to: EPA Docket Center, Environmental Protection Agency, Mail Code 28221T, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

EPA's policy is that all comments received will be included in the public docket without change including any personal information provided, unless the comment includes profanity, threats, information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

FOR FURTHER INFORMATION CONTACT: Gina Moore, Office of Resources and Business Operations, 3101A, Federal Advisory Committee Management Division, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: 202–566–

0462; email address: moore.gina@epa.gov.

SUPPLEMENTARY INFORMATION: A notice initiating a 60-day public comment period for this action was published on March 2, 2022 (87 FR 11704). This notice extends the public comment period to allow for a 60-day comment period on supplemental documents that have been added to the docket since the **Federal Register** notice published on March 2, 2022. These supporting documents, which explain in detail the information that the EPA will be collecting, are available in the public docket for this ICR. The docket can be viewed online at www.regulations.gov or in person at the EPA Docket Center, WJC West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The telephone number for the Docket Center is 202–566–1744. For additional information about EPA's public docket, visit <http://www.epa.gov/dockets>.

Pursuant to section 3506(c)(2)(A) of the PRA, EPA is soliciting comments and information to enable it to: (i) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Agency, including whether the information will have practical utility; (ii) evaluate the accuracy of the Agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (iii) enhance the quality, utility, and clarity of the information to be collected; and (iv) minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses. EPA will consider the comments received and amend the ICR as appropriate. The final ICR package will then be submitted to OMB for review and approval. At that time, EPA will issue another **Federal Register** notice to announce the submission of the ICR to OMB and the opportunity to submit additional comments to OMB.

Abstract: Agency officials developed the "Ethnicity, Race, Gender and Disability Self-Identification Form" to comply with Executive Order (14035): Diversity, Equity, Inclusion and Accessibility in the Federal Workforce, Section 5(e) that directs the U.S. Environmental Protection Agency to collect and analyze voluntarily self-reported demographic data regarding the membership of federal advisory

committees to pursue opportunities to increase diversity, equity, inclusion, and accessibility. This information collection request will assist EPA when selecting members to EPA's scientific and technical federal advisory committees to ensure that members and future nominees reflect the diversity of the American people in terms of gender, race, ethnicity, geography, and other characteristics.

Form Number: EPA 5800-068.

Respondents/affected entities: Entities potentially affected by this action are approximately 200 candidates for membership on EPA's federal advisory committees. In an effort to ensure future nominees reflect the diversity of America, all nominees are encouraged to complete and submit EPA Form 5800-068 when applying for membership in accordance with Executive Order 14035 of June 25, 2021: *Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce*.

Respondent's obligation to respond: Voluntary.

Estimated number of respondents: 200 (total).

Frequency of response: Annually.

Total estimated burden: 16.6 hours (per year). Burden is defined at 5 CFR 1320.03(b).

Total estimated cost: \$0.

Changes in Estimates: There is no change in burden because this is a new information collection request.

Courtney Kerwin,

Director, Regulatory Support Division.

[FR Doc. 2022-08502 Filed 4-20-22; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-ORD-2015-0765; FRL-9759-01-ORD]

Board of Scientific Counselors (BOSC) Executive Committee Meeting—May 2022

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of public meeting.

SUMMARY: The Environmental Protection Agency (EPA), Office of Research and Development (ORD), gives notice of virtual meetings of the Board of Scientific Counselors (BOSC) Executive Committee (EC) to review ORD's six Strategic Research Action Plans (StRAPs) and request for public comment on the six draft StRAPs.

DATES: The deliberation meeting will be held over two days via videoconference:

a. Wednesday, May 4, 2022, from 12 p.m. to 5 p.m. (EDT); and

b. Thursday, May 5, 2022, from 12 p.m. to 5 p.m. (EDT).

Attendees must register by May 3, 2022.

Meeting times are subject to change. This series of meetings is open to the public. Comments must be received by May 3, 2022, to be considered by the BOSC. Requests for the draft agenda or making a presentation at the meeting will be accepted until May 3, 2022.

ADDRESSES: Instructions on how to connect to the videoconference will be provided upon registration at: <https://epa-bosc-executive-committee-mtg.eventbrite.com>.

Submit your comments to Docket ID No. EPA-HQ-ORD-2015-0765 by one of the following methods:

- www.regulations.gov: Follow the online instructions for submitting comments.
- *Note:* comments submitted to the www.regulations.gov website are anonymous unless identifying information is included in the body of the comment.
- *Email:* Send comments by electronic mail (email) to: ORD.Docket@epa.gov, Attention Docket ID No. EPA-HQ-ORD-2015-0765.
- *Note:* comments submitted via email are not anonymous. The sender's email will be included in the body of the comment and placed in the public docket which is made available on the internet.

Instructions: All comments received, including any personal information provided, will be included in the public docket without change and may be made available online at www.regulations.gov. Information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute will not be included in the public docket and should not be submitted through www.regulations.gov or email. For additional information about the EPA's public docket visit the EPA Docket Center homepage at <http://www.epa.gov/dockets/>.

Public Docket: Publicly available docket materials may be accessed *Online* at www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: The Designated Federal Officer (DFO), Tom Tracy, via phone/voicemail at: 919-541-4334; or via email at: tracy.tom@epa.gov.

Any member of the public interested in receiving a draft agenda, attending the meeting, or making a presentation at the meeting should contact Tom Tracy no later than May 3, 2022.

SUPPLEMENTARY INFORMATION: The Board of Scientific Counselors (BOSC) is a

federal advisory committee that provides advice and recommendations to EPA's Office of Research and Development on technical and management issues of its research programs. The meeting agenda and materials including the draft StRAPs will be posted to <https://www.epa.gov/bosc>.

Proposed agenda items for the meeting include, but are not limited to, the following: Review the six StRAPs and BOSC deliberation.

Information on Services Available: For information on translation services, access, or services for individuals with disabilities, please contact Tom Tracy at 919-541-4334 or tracy.tom@epa.gov. To request accommodation of a disability, please contact Tom Tracy at least ten days prior to the meeting to give the EPA adequate time to process your request.

Authority: Pub. L. 92-463, 1, Oct. 6, 1972, 86 Stat. 770.

Mary Ross,

Director, Office of Science Advisor, Policy and Engagement.

[FR Doc. 2022-08517 Filed 4-20-22; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-2022-0260; FRL-8464-03-OW]

Consumer Confidence Report Rule Revision: Virtual Listening Session

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of public meeting.

SUMMARY: The Environmental Protection Agency (EPA) will host a virtual, public, listening session on April 26, 2022. The goal of this event is to obtain further public input on EPA's revision to the Consumer Confidence Report (CCR) Rule from public water systems, environmental groups, public interest groups, risk communication experts, the States, and other interested parties. EPA will also be seeking input from individuals and communities that have historically been, as well as those that currently are, underserved by public health planning, policies, and practices and those communities that are most vulnerable to environmental injustices. For more information on this event see the **SUPPLEMENTAL INFORMATION** section of this announcement.

DATES: EPA will host a virtual, public, listening session on April 26, 2022, from 2 p.m. to 5 p.m., eastern time. Further details on registration for this event will

be posted on EPA's drinking water website at: <https://www.epa.gov/ccr>.

ADDRESSES: Individuals, including those that attend and provide oral statements, are encouraged to send written comments, identified by Docket ID EPA-HQ-OW-2022-0260, by the following method:

Federal eRulemaking Portal: <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.

Instructions: All submissions received must include the Docket ID No. EPA-HQ-OW-2022-0260 for this EPA event. For detailed instructions on sending comments, see the "Public Participation" heading of the **SUPPLEMENTARY INFORMATION** section of this announcement.

FOR FURTHER INFORMATION CONTACT:

Sarah Bradbury, U.S. EPA, 1200 Pennsylvania Avenue NW, Washington, DC, 20460; telephone number: 202-564-3116; email address: OGWDWCCRrevisions@epa.gov.

SUPPLEMENTARY INFORMATION

I. Public Participation

A. Written Comments

Submit your comments, identified by Docket ID EPA-HQ-OW-2022-0260, at <https://www.regulations.gov>. Once submitted, comments cannot be edited or removed from the docket. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www.epa.gov/dockets/commenting-epa-dockets>.

B. Details About Participating in the Listening Session

The public is invited to speak during the upcoming listening session on April 26, 2022. Further information on how to sign-up for a 5-minute speaking slot during the listening session will be posted on EPA's website at <https://www.epa.gov/ccr>. EPA intends to also make the listening session available for

viewing to those who are not participating and are interested in listening only. Potential topics of discussion for speakers who sign-up for the listening session may include, but are not limited to:

1. Tools that address challenges to developing CCRs.
2. CCR delivery methods, including electronic delivery options.
3. Considerations and concerns related to underserved communities and environmental justice.
4. Opinions on biannual delivery, including timing and content of reports.
5. CCR accessibility challenges and solutions.
6. Improving readability, clarity, understandability, accuracy, and risk communication of the information presented in CCRs.

EPA will be posting additional information on registration and speaker sign-up for the listening session on <https://www.epa.gov/ccr> as it becomes available.

Eric G. Burneson,

Acting Director, Office of Ground Water and Drinking Water.

[FR Doc. 2022-08480 Filed 4-20-22; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL DEPOSIT INSURANCE CORPORATION

Sunshine Act Meetings

TIME AND DATE: 10:00 a.m. on Tuesday, April 19, 2022.

PLACE: The meeting was held via video conference on the internet.

STATUS: Closed.

MATTERS TO BE CONSIDERED: In calling the meeting, the Board determined, on motion of Director Rohit Chopra (Director, Consumer Financial Protection Bureau), seconded by Director Michael J. Hsu (Acting Comptroller of the Currency), and concurred in by Acting Chairman Martin J. Gruenberg, that the public interest did not require consideration of the matters in a meeting open to public observation; and that the matters could be considered in a closed meeting by authority of subsections (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), (c)(9)(B), and (10) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), (c)(9)(B), and (10)).

CONTACT PERSON FOR MORE INFORMATION: Requests for further information concerning the meeting may be directed to Debra A. Decker, Executive Secretary of the Corporation, at 202-898-8748.

Dated this 19th day of April, 2022.

Federal Deposit Insurance Corporation.

James P. Sheesley,

Assistant Executive Secretary.

[FR Doc. 2022-08632 Filed 4-19-22; 4:15 pm]

BILLING CODE 6714-01-P

FEDERAL ELECTION COMMISSION

Sunshine Act Meetings

TIME AND DATE: Tuesday, April 26, 2022 at 10:00 a.m. and its continuation at the conclusion of the open meeting on April 28, 2022.

PLACE: 1050 First Street NE, Washington, DC and Virtual (This meeting will be a hybrid meeting).

STATUS: This meeting will be closed to the public.

MATTERS TO BE CONSIDERED: Compliance matters pursuant to 52 U.S.C. 30109. Matters concerning participation in civil actions or proceedings or arbitration.

* * * * *

CONTACT PERSON FOR MORE INFORMATION: Judith Ingram, Press Officer, Telephone: (202) 694-1220.

(Authority: Government in the Sunshine Act, 5 U.S.C. 552b)

Vicktoria J. Allen,

Acting Deputy Secretary of the Commission.

[FR Doc. 2022-08643 Filed 4-19-22; 4:15 pm]

BILLING CODE 6715-01-P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[OMB Control No. 9000-0129; Docket No. 2022-0053; Sequence No. 12]

Information Collection; Cost Accounting Standards Administration

AGENCY: Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, and the Office of Management and Budget (OMB) regulations, DoD, GSA, and NASA invite the public to comment on an extension concerning cost accounting standards administration.

DoD, GSA, and NASA invite comments on: Whether the proposed collection of information is necessary for the proper performance of the

functions of Federal Government acquisitions, including whether the information will have practical utility; the accuracy of the estimate of the burden of the proposed information collection; ways to enhance the quality, utility, and clarity of the information to be collected; and ways to minimize the burden of the information collection on respondents, including the use of automated collection techniques or other forms of information technology. OMB has approved this information collection for use through November 30, 2022. DoD, GSA, and NASA propose that OMB extend its approval for use for three additional years beyond the current expiration date.

DATES: DoD, GSA, and NASA will consider all comments received by June 21, 2022.

ADDRESSES: DoD, GSA, and NASA invite interested persons to submit comments on this collection through <https://www.regulations.gov> and follow the instructions on the site. This website provides the ability to type short comments directly into the comment field or attach a file for lengthier comments. If there are difficulties submitting comments, contact the GSA Regulatory Secretariat Division at 202-501-4755 or GSARegSec@gsa.gov.

Instructions: All items submitted must cite OMB Control No. 9000-0129, Cost Accounting Standards Administration. Comments received generally will be posted without change to <https://www.regulations.gov>, including any personal and/or business confidential information provided. To confirm receipt of your comment(s), please check www.regulations.gov, approximately two-to-three days after submission to verify posting.

FOR FURTHER INFORMATION CONTACT: Zenaida Delgado, Procurement Analyst, at telephone 202-969-7207, or zenaida.delgado@gsa.gov.

SUPPLEMENTARY INFORMATION:

A. OMB Control Number, Title, and Any Associated Form(s)

9000-0129, Cost Accounting Standards Administration.

B. Need and Uses

This justification supports an extension of the expiration date of OMB Control No. 9000-0129. This clearance covers the information that contractors must submit to comply with the Federal Acquisition Regulation (FAR) clause at 52.230-6, Administration of Cost Accounting Standards. This FAR clause requires contractors performing Cost Accounting Standards (CAS) covered contracts to submit notifications and

descriptions of certain cost accounting practice changes, including revisions to their Disclosure Statements, if applicable. Often these descriptions are quite complex.

This information is used by contracting officers for ascertaining compliance with CAS.

C. Annual Burden

Respondents: 607.

Total Annual Responses: 1,821.

Total Burden Hours: 318,675.

Obtaining Copies: Requesters may obtain a copy of the information collection documents from the GSA Regulatory Secretariat Division, by calling 202-501-4755 or emailing GSARegSec@gsa.gov. Please cite OMB Control No. 9000-0129, Cost Accounting Standards Administration.

Janet Fry,

Director, Federal Acquisition Policy Division, Office of Governmentwide Acquisition Policy, Office of Acquisition Policy, Office of Governmentwide Policy.

[FR Doc. 2022-08505 Filed 4-20-22; 8:45 am]

BILLING CODE 6820-EP-P

GENERAL SERVICES ADMINISTRATION

[OMB Control No. 3090-0283; Docket No. 2019-0001; Sequence No. 4]

Information Collection; Contractor Information Worksheet; GSA Form 850

AGENCY: Identity, Credential, and Access Management (ICAM) Division, Office of Security, Office of Mission Assurance (OMA), General Services Administration (GSA).

ACTION: Notice of request for comments regarding an extension to an existing OMB clearance.

SUMMARY: Under the provisions of the Paperwork Reduction Act, the Regulatory Secretariat Division will be submitting to the Office of Management and Budget (OMB) a request to review and approve a previously approved information collection requirement, with changes, expanding the coverage of the information collection of the Contractor Information Worksheet; GSA Form 850. GSA requires OMB approval for this collection to make determinations on granting unescorted physical access to GSA-controlled facilities and/or logical access to GSA-controlled information systems. The approval is critical for GSA to continue following contractor onboarding processes required for working on GSA contracts.

DATES: Submit comments on or before: June 21, 2022.

ADDRESSES: Submit comments identified by information collection 3090-0283 via <http://www.regulations.gov>.

Submit comments via the Federal eRulemaking portal by searching the OMB control number. Select the link "Submit a Comment" that corresponds with "Information Collection 3090-0283, Contractor Information Worksheet; GSA Form 850". Follow the instructions provided at the "Submit a Comment" screen. Please include your name, company name (if any), and "Information Collection 3090-0283, Contractor Information Worksheet; GSA Form 850" on your attached document.

Instructions: Please submit comments only and cite Information Collection 3090-0283, Contractor Information Worksheet; GSA Form 850, in all correspondence related to this collection. Comments received generally will be posted without change to <https://www.regulations.gov>, including any personal and/or business confidential information provided. To confirm receipt of your comment(s), please check www.regulations.gov, approximately two-to-three days after submission to verify posting.

FOR FURTHER INFORMATION CONTACT: Mr. Phil Ahn, Deputy Director, OMA Identity Credential and Access Management Division, GSA, telephone 202-501-2447 or via email at phillip.ahn@gsa.gov.

SUPPLEMENTARY INFORMATION:

A. Purpose

The U.S. Government conducts criminal checks to establish that applicants or incumbents working for the Government under contract may have unescorted access to federally controlled facilities. GSA uses the Contractor Information Worksheet; GSA Form 850, and digitally captured fingerprints to conduct an FBI National Criminal Information Check (NCIC) for each contractor's physical access determination to GSA-controlled facilities and/or logical access to GSA-controlled information systems. Manual fingerprint card SF-87 is used for exception cases such as contractor's significant geographical distance from fingerprint enrollment sites.

The Office of Management and Budget (OMB) Guidance M-05-24 for Homeland Security Presidential Directive (HSPD) 12, authorizes Federal departments and agencies to ensure that contractors have limited/controlled access to facilities and information systems. GSA Directive CIO P 2181.1 Homeland Security Presidential Directive-12, Personal Identity

Verification and Credentialing (available at <http://www.gsa.gov/hspd12>), states that GSA contractors must undergo a minimum of an FBI National Criminal Information Check (NCIC) to receive unescorted physical access to GSA-controlled facilities and/or logical access to GSA-controlled information systems.

Contractors' Social Security Number is needed to keep records accurate, because other people may have the same name and birth date. Executive Order 9397, Numbering System for Federal Accounts Relating to Individual Persons, also allows Federal agencies to use this number to help identify individuals in agency records.

B. Annual Reporting Burden

Respondents: 25,000.
Responses per Respondent: 1.
Total Annual Responses: 25,000.
Hours per Response: .25.
Total Burden Hours: 6,250.

C. Public Comments

Public comments are particularly invited on: Whether this collection of information is necessary and whether it will have practical utility; whether our estimate of the public burden of this collection of information is accurate and based on valid assumptions and methodology; ways to enhance the quality, utility, and clarity of the information to be collected.

Obtaining Copies of Proposals: Requesters may obtain a copy of the information collection documents from the GSA Regulatory Secretariat Division, by calling 202-501-4755 or emailing GSARegSec@gsa.gov. Please cite OMB Control No. 3090-0283, Contractor Information Worksheet; GSA Form 850 in all correspondence. The form can be downloaded from the GSA Forms

Library at <http://www.gsa.gov/forms>. Type GSA 850 in the form search field.

Beth Anne Killoran,
Deputy Chief Information Officer.
 [FR Doc. 2022-08506 Filed 4-20-22; 8:45 am]

BILLING CODE 6820-34-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

[OMB No. 0970-0215]

Submission for OMB Review; Tribal TANF Data Report, TANF Annual Report, and Reasonable Cause/Corrective Action Documentation Process

AGENCY: Office of Family Assistance, Administration for Children and Families, HHS.

ACTION: Request for public comment.

SUMMARY: The Administration for Children and Families (ACF) is requesting a 3-year extension of the form OFA-0084: Tribal TANF Data Report, TANF Annual Report, and Reasonable Cause/Corrective Action Documentation Process (OMB #0970-0215, expiration 4/30/2022). There are no changes requested to the form.

DATES: *Comments due within 30 days of publication.* OMB must make a decision about the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function. You can also obtain copies of the proposed collection of information by emailing infocollection@acf.hhs.gov. Identify all emailed requests by the title of the information collection.

SUPPLEMENTARY INFORMATION:

Description: 42 U.S.C. 612 (section 412 of the Social Security Act as amended by Pub. L. 104-193, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996), mandates that federally recognized Indian tribes with an approved Tribal TANF program collect and submit to the Secretary of the Department of Health and Human Services data on the recipients served by the tribes' programs. This information includes both aggregated and disaggregated data on case characteristics and individual characteristics. In addition, tribes that are subject to a penalty are allowed to provide reasonable cause justifications as to why a penalty should not be imposed or may develop and implement corrective compliance procedures to eliminate the source of the penalty. Finally, there is an annual report that requires the tribes to describe program characteristics. All of the above requirements are currently approved by OMB, and ACF is simply proposing to extend them without any changes.

Respondents: Native American tribes and tribal organizations operating Tribal TANF programs.

ANNUAL BURDEN ESTIMATES

Instrument	Total number of respondents	Annual number of responses per respondent	Average burden hours per response	Annual burden hours
Final Tribal TANF Data Report	75	4	451	135,300
Tribal TANF Annual Report	75	1	40	3,000
Tribal TANF Reasonable Cause/Corrective	10	1	60	600

Estimated Total Annual Burden Hours: 138,900.

Authority: 42 U.S.C. 612, 45 CFR part 286.

Mary B. Jones,
ACF/OPRE Certifying Officer.
 [FR Doc. 2022-08498 Filed 4-20-22; 8:45 am]
BILLING CODE 4184-36-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES**Administration for Children and Families****[OMB No. 0970–0406]****Proposed Information Collection Activity; ACF Performance Progress Report, ACF–OGM–SF–PPR–B****AGENCY:** Office of Grants Management, Administration for Children and Families, HHS.**ACTION:** Request for public comment.**SUMMARY:** The Office of Grants Management (OGM), in the Administration for Children and Families (ACF) is requesting a 3-year extension of the form ACF–OGM–SF–PPR–B (OMB #0970–0406, expiration 11/30/2022). There are minor changes requested to the form.**DATES:** *Comments due within 60 days of publication.* In compliance with the

requirements of the Paperwork Reduction Act of 1995, ACF is soliciting public comment on the specific aspects of the information collection described above.

ADDRESSES: You can obtain copies of the proposed collection of information and submit comments by emailing infocollection@acf.hhs.gov. Identify all requests by the title of the information collection.**SUPPLEMENTARY INFORMATION:***Description:* ACF's OGM is proposing the continued collection of program performance data for ACF's discretionary grantees using the existing ACF–OGM–SF–PPR–B (OMB #0970–0406, expiration 11/30/2022) form with minor changes to improve the function of the form. Revisions include collection of the Unique Entity Identifier instead of the Data Universal Numbering System, a rewording of the submission instructions to be more inclusive of all possible report submission methods utilized across ACF, and the addition of

a program indicator to collect information on activities recipients conducted during the reporting period to address or advance equity. The form, developed by OGM, was created from the basic template of the OMB-approved reporting format of the Program Performance Report. OGM uses this data to ensure grantees are proceeding in a satisfactory manner in meeting the approved goals and objectives of the project and if funding should be continued for another budget period.

OMB grants policy requires grantees to report on performance. Specific citations are contained in 45 CFR part 75 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for HHS Awards.

Respondents: All ACF discretionary grantees. State governments, Native American Tribal governments, Native American Tribal Organizations, local governments, universities, and nonprofits with or without 501(c)(3) status with the IRS.**ANNUAL BURDEN ESTIMATES**

Instrument	Total number of respondents	Annual number of responses per respondent	Average burden hours per response	Annual burden hours
ACF–OGM–SF–PPR–B	6,000	2	1	12,000

Estimated Total Annual Burden Hours: 12,000.*Comments:* The Department specifically requests comments on (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted within 60 days of this publication.*Authority:* 45 CFR part 75.**Mary B. Jones,***ACF/OPRE Certifying Officer.*

[FR Doc. 2022–08520 Filed 4–20–22; 8:45 am]

BILLING CODE 4184–01–P**DEPARTMENT OF HEALTH AND HUMAN SERVICES****Administration for Children and Families****[OMB No. 0970–0506]****Submission for OMB Review; Evaluation of Employment Coaching for TANF and Related Populations****AGENCY:** Office of Planning, Research, and Evaluation, Administration for Children and Families, HHS.**ACTION:** Request for public comment.**SUMMARY:** The Administration for Children and Families (ACF) is proposing to continue ongoing approved data collection activities and add additional activities for the sample enrolled in the Evaluation of Employment Coaching for TANF and Related Populations (Office of Management and Budget (OMB)#: 0970–0506). This includes (1) an extension for the previously approved second follow-up survey data collection; (2) new data collection through a third follow-up survey; and (3) new data collection through follow-up semi-structured

interviews with management, staff, supervisors, and participants.

DATES: *Comments due within 30 days of publication.* OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication.**ADDRESSES:** Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting “Currently under 30-day Review—Open for Public Comments” or by using the search function. You can also obtain copies of the proposed collection of information by emailing OPREinfocollection@acf.hhs.gov. All emailed requests should be identified by the title of the information collection.**SUPPLEMENTARY INFORMATION:***Description:* This study is providing an opportunity to learn more about the potential of coaching to help clients achieve self-sufficiency and other

desired employment-related outcomes. It includes the following employment programs: MyGoals for Employment Success in Baltimore; MyGoals for Employment Success in Houston; Family Development and Self-Sufficiency program in Iowa; LIFT in New York City, Chicago, and Los Angeles; Work Success in Utah; and Goal4 It! in Jefferson County, Colorado. Together, these programs include Temporary Assistance for Needy Families (TANF) agencies and other public or private employment programs that serve low-income individuals. Each site has a robust coaching component and the capacity to conduct a rigorous impact evaluation. This study is providing information on whether coaching helps people develop self-regulation skills, obtain and retain jobs, advance in their careers, move toward self-sufficiency, and improve their overall well-being. To meet these objectives, this study includes an impact and implementation study, as approved by OMB. The approved impact study initially included two follow-up surveys at approximately 9

months and 21 months, respectively, after random assignment.

This submission, in part, builds on the existing impact study, which randomly assigned participants to either a “program group,” who were paired with a coach, or to a “control group,” who were not paired with a coach. The effectiveness of the coaching will be determined by differences between members of the program and control groups in outcomes such as obtaining and retaining employment, earnings, measures of self-sufficiency, and measures of self-regulation.

The proposed extension for the second follow-up survey data collection under OMB #0970–0506 will allow for continued follow-up in the evaluation sites. The extension is necessary to complete the second follow-up survey. There are no changes to the previously approved information collection. Additionally, the proposed new information collection through a third follow-up survey will provide information about participants at least 4 years after random assignment. This activity will provide rigorous evidence on whether the coaching interventions are effective, for whom, and under what

circumstances over the longer term. The information collected at a later follow-up point will be used to assess how employment coaching might have a continued effect on participants long after they have left coaching programs.

This submission also builds on the existing implementation study. The proposed new information collection through follow-up semi-structured interviews with management, staff, supervisors, and participants under OMB #0970–0506 will enable additional input from employment coaching program staff and participants on the processes and perceptions of employment coaching. The proposed new data collection instruments will provide descriptive information about how coaches form trusting relationships with their participants and other key topics that have emerged as important in analysis of previously collected study data.

Respondents: Individuals enrolled in the Evaluation of Employment Coaching for TANF and Related Populations study. All participants will be able to opt out of participating in the data collection activities.

ANNUAL BURDEN ESTIMATES—BURDEN REMAINING FROM PREVIOUSLY APPROVED INFORMATION COLLECTIONS

Instrument	Number of respondents (total over request period)	Number of responses per respondent (total over request period)	Avg. burden per response (in hours)	Annual burden (in hours)
Second follow-up survey	824	1	0.75	618

Note: Data collection for the second follow-up is expected to be completed within the next year.

Estimated Total Annual Burden
Hours: 618.

NEW BURDEN REQUESTED

Instrument	Number of respondents (total over request period)	Number of responses per respondent (total over request period)	Avg. burden per response (in hours)	Total burden (in hours)	Annual burden (in hours)
Third follow-up survey	4,239	1	0.75	3,179	1,060
Semi-structured management interviews	20	1	1	20	7
Semi-structured staff and supervisor interviews	40	1	1	40	13
Semi-structured participant interviews, MyGoals	14	1	2.5	35	12
Semi-structured participant interviews, LIFT	7	1	2	14	5
Semi-structured participant interviews, FaDSS and Goal4 It!	14	1	1.5	21	7

Note: New data collection is expected to take place over about 3 years.

Estimated Total Annual Burden Hours: 1,104.

Authority: 42 U.S.C. 613.

Mary B. Jones,

ACF/OPRE Certifying Officer.

[FR Doc. 2022-08495 Filed 4-20-22; 8:45 am]

BILLING CODE 4184-09-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Community Living

Availability of Program Application Instructions for MIPPA Program Funds

Title: Medicare Improvements for Patients and Providers Act: State Applications for Medicare Low-Income Benefit Programs Enrollment Outreach and Assistance.

Announcement Type: Initial.

Funding Opportunity Number: CIP-MI-22-001.

Statutory Authority: The Medicare Improvements for Patients and Providers Act of 2008, as amended by the Patient Protection and Affordable Care Act of 2010 and reauthorized by the American Taxpayer Relief Act of 2012 (ATRA), Protecting Access to Medicare Act of 2014, Medicare Access and CHIP Reauthorization Act of 2015, Bipartisan Budget Act of 2018, Coronavirus Aid, Relief, and Economic Security Act of 2020, and Consolidated Appropriations Act of 2021.

Catalog of Federal Domestic Assistance (CFDA) Number: 93.071.

Dates: The deadline date for the submission of MIPPA Program State Plans is 11:59 p.m. ET on June 21, 2022.

I. Funding Opportunity Description

The Medicare Improvement for Patients and Providers Act (MIPPA) program supports states through grants to provide outreach and assistance to Medicare beneficiaries with limited incomes and assets to ensure the beneficiaries have access to all Medicare related benefits available to them. MIPPA state grantees help educate Medicare beneficiaries about benefit programs that help them pay for Medicare including the Low-Income Subsidy (LIS) program for Medicare Part D and the Medicare Savings Programs (MSPs). In addition, MIPPA grantees provide education on Medicare Preventive Services. MIPPA grantees provide education through public outreach while also providing one-on-one assistance to eligible Medicare beneficiaries to help them access and apply for benefit programs that help lower the costs of their Medicare premiums and deductibles.

MIPPA state funding is limited to agencies eligible for MIPPA funding:

- Priority Area 1—State Health Insurance Assistance Program (SHIP): SHIP grant recipients or (SHIP-designated state agencies)
- Priority Area 2—Area Agencies on Aging (AAAs): State Units on Aging (SUA) (or SUA-designated state agencies)
- Priority Area 3—Aging and Disability Resource Centers (ADRCs): Agencies that are established ADRCs who have received an ACL ADRC COVID grant (or designated state agency serving as the No Wrong Door lead)

ACL will accept only one application for each Priority Area per state. If an agency is eligible for more than one MIPPA Priority Area, the agency may combine their responses into one comprehensive application.

These funds will allow agencies to provide enhanced outreach to eligible Medicare beneficiaries regarding their preventive, wellness, and limited income benefits; application assistance to individuals who may be eligible for LIS or MSPs; and outreach activities covering LIS, MSP, or aimed at preventing disease and promoting wellness. Applicant plans should go above and beyond those regular activities planned in response to other funding sources.

II. Award Information

1. Funding Instrument Type

These awards will be made in the form of grants to agencies for each MIPPA Priority Area:

Priority Area 1—SHIP: Grants to state agencies (State Units on Aging or State Departments of Insurance) that administer the SHIP to provide enhanced outreach to eligible Medicare beneficiaries regarding their preventive, wellness, and limited income benefits; application assistance to individuals who may be eligible for LIS or MSPs; and outreach activities aimed at preventing disease and promoting wellness.

Priority Area 2—AAA: Grants to state agencies for AAA programs to provide enhanced outreach to eligible Medicare beneficiaries regarding their preventive, wellness, and limited income benefits; application assistance to individuals who may be eligible for LIS or MSPs; and outreach activities aimed at preventing disease and promoting wellness.

Priority Area 3—ADRC: Aging and Disability Resource Center Programs (ADRC): Grants to agencies that are established ADRCs to provide outreach regarding Medicare Part D benefits

related to LIS and MSPs, and conduct outreach activities aimed at preventing disease and promoting wellness.

2. Anticipated Total Priority Area Funding per Budget Period

ACL intends to make available, under this program announcement, grant awards for the three MIPPA priority areas. Funding will be distributed through a formula as identified in statute. The amounts allocated are based upon factors defined in statute and will be distributed to each priority area based on the formula. ACL will fund total project periods of up to two (2) years contingent upon availability of federal funds.

Priority Area 1—SHIP: \$15.8 million in FY 2022 for state agencies that administer the SHIP Program.

Priority Area 2—AAA: \$13.4 million in FY 2022 for State Units on Aging for Area Agencies on Aging.

Priority Area 3—ADRC: \$4.6 million in FY 2022 for agencies that are established ADRCs who have received an ACL ADRC COVID grant.

III. Eligibility Criteria and Other Requirements

1. Eligible Applicants for MIPPA State Grants:

Priority Area 1—SHIP: Only existing SHIP grant recipients or (SHIP-designated state agencies) are eligible to apply.

Priority Area 2—AAA: Only State Units on Aging (SUA) (or SUA-designated state agencies) are eligible to apply.

Priority Area 3—ADRC: Only agencies that are established ADRCs who have received an ACL ADRC COVID grant (or designated state agency serving as the No Wrong Door lead) are eligible to apply.

Eligibility may change if future funding is available.

2. Cost Sharing or Matching is not required.

3. Unique Entity ID: All grant applicants must obtain and keep current a Unique Entity ID (UEI). On April 4, 2022, the unique entity identifier used across the federal government changed from the DUNS Number to the Unique Entity ID (generated by *SAM.gov*). The Unique Entity ID is a 12-character alphanumeric ID assigned to an entity by *SAM.gov*. The UEI is viewable in your *SAM.gov* entity registration record.

4. Intergovernmental Review: Executive Order 12372, Intergovernmental Review of Federal Programs, is not applicable to these grant applications.

IV. Submission Information

1. Application Kit

Application Kit/Program Instructions are available at www.grantsolutions.gov. Instructions for completing the application kit will be available on the site.

2. Submission Dates and Times

To receive consideration, applications must be submitted by 11:59 p.m. Eastern Time on June 21, 2022, through www.GrantSolutions.gov.

VII. Agency Contacts

Direct inquiries regarding programmatic issues to: Margaret Flowers, Phone: 202.795.7315, Email: Margaret.Flowers@acl.hhs.gov.

Dated: April 15, 2022.

Alison Barkoff,

Acting Administrator and Assistant Secretary for Aging.

[FR Doc. 2022-08511 Filed 4-20-22; 8:45 am]

BILLING CODE 4154-01-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2018-N-3771]

Report on the Performance of Drug and Biologics Firms in Conducting Postmarketing Requirements and Commitments; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of the Agency's annual report entitled "Report on the Performance of Drug and Biologics Firms in Conducting Postmarketing Requirements and Commitments." Under the Federal Food, Drug, and Cosmetic Act (FD&C Act), FDA is required to report annually on the status of postmarketing requirements (PMRs) and postmarketing commitments (PMCs) required of, or agreed upon by, application holders of approved drug and biological products. The report on the status of the studies and clinical trials that applicants have agreed, or are required, to conduct is on FDA's "Postmarketing Requirements and Commitments: Reports" web page (<https://www.fda.gov/drugs/postmarket-requirements-and-commitments/postmarketing-requirements-and-commitments-reports>).

FOR FURTHER INFORMATION CONTACT:

Kathy Weil, Center for Drug Evaluation

and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 22, Rm. 5367, Silver Spring, MD 20993-0002, 301-796-0700; or Stephen Ripley, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993-0002, 240-402-7911.

SUPPLEMENTARY INFORMATION:

I. Background

Section 506B(c) of the FD&C Act (21 U.S.C. 356b(c)) requires FDA to publish an annual report on the status of postmarketing studies that applicants have committed to, or are required to conduct, and for which annual status reports have been submitted.

Under §§ 314.81(b)(2)(vii) and 601.70 (21 CFR 314.81(b)(2)(vii) and 601.70), applicants of approved drugs and licensed biological products are required to submit annually a report on the status of each clinical safety, clinical efficacy, clinical pharmacology, and nonclinical toxicology study or clinical trial either required by FDA (PMRs) or that they have committed to conduct (PMCs), either at the time of approval or after approval of their new drug application, abbreviated new drug application, or biologics license application. The status of PMCs concerning chemistry, manufacturing, and production controls and the status of other studies or clinical trials conducted on an applicant's own initiative are not required to be reported under §§ 314.81(b)(2)(vii) and 601.70 and are not addressed in this report. Furthermore, section 505(o)(3)(E) of the FD&C Act (21 U.S.C. 355(o)(3)(E)) requires that applicants report periodically on the status of each required study or clinical trial and each study or clinical trial "otherwise undertaken . . . to investigate a safety issue . . ."

An applicant must report on the progress of the PMR/PMC on the anniversary of the drug product's approval¹ until the PMR/PMC is completed or terminated and FDA determines that the PMR/PMC has been fulfilled or that the PMR/PMC is either no longer feasible or would no longer provide useful information.

¹ An applicant must submit an annual status report on the progress of each open PMR/PMC within 60 days of the anniversary date of U.S. approval of the original application or on an alternate reporting date that was granted by FDA in writing. Some applicants have requested and been granted by FDA alternate annual reporting dates to facilitate harmonized reporting across multiple applications.

II. Fiscal Year 2020 Report

With this notice, FDA is announcing the availability of the Agency's annual report entitled "Report on the Performance of Drug and Biologics Firms in Conducting Postmarketing Requirements and Commitments."² Information in this report covers any PMR/PMC that was established, in writing, at the time of approval or after approval of an application or a supplement to an application and summarizes the status of PMRs/PMCs in fiscal year (FY) 2020 (*i.e.*, as of September 30, 2020). Information summarized in the report reflects combined data from the Center for Drug Evaluation and Research and the Center for Biologics Evaluation and Research and includes the following: (1) The number of applicants with open PMRs/PMCs; (2) the number of open PMRs/PMCs; (3) the timeliness of applicant submission of the annual status reports (ASRs); (4) FDA-verified status of open PMRs/PMCs reported in § 314.81(b)(2)(vii) or § 601.70 ASRs; (5) the status of closed PMRs/PMCs; and (6) the distribution of the status by fiscal year of establishment³ (FY2014 to FY2020) for PMRs and PMCs open at the end of FY2020, or those closed within FY2020. Additional information about PMRs/PMCs is provided on FDA's website at <https://www.fda.gov/drugs/guidance-compliance-regulatory-information/postmarket-requirements-and-commitments>.

Dated: April 15, 2022.

Lauren K. Roth,

Associate Commissioner for Policy.

[FR Doc. 2022-08499 Filed 4-20-22; 8:45 am]

BILLING CODE 4164-01-P

² The "Report on the Performance of Drug and Biologics Firms in Conducting Postmarketing Requirements and Commitments" can be found on the FDA's Postmarketing Requirements and Commitments: Reports web page: <https://www.fda.gov/drugs/postmarket-requirements-and-commitments/postmarketing-requirements-and-commitments-reports>.

³ The establishment date is the date of the formal FDA communication to the applicant that included the final FDA-required (PMR) or requested (PMC) postmarketing study or clinical trial.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA-2022-N-0165]

Providing Mail-Back Envelopes and Education on Safe Disposal With Opioid Analgesics Dispensed in an Outpatient Setting; Establishment of a Public Docket; Request for Comments

AGENCY: Food and Drug Administration, Health and Human Services (HHS).

ACTION: Notice; establishment of a public docket; request for comments.

SUMMARY: The Food and Drug Administration (FDA, the Agency, or we) is announcing the establishment of a docket to solicit public comment on a potential modification to the Opioid Analgesic Risk Evaluation and Mitigation Strategy (OA REMS) to require that mail-back envelopes be dispensed and education on safe disposal provided with opioid analgesics dispensed in an outpatient setting. Such a requirement could reduce the amount of unused opioid analgesics in patients' homes, thereby reducing opportunities for nonmedical use, accidental exposure, and overdose, and possibly reducing the development of new opioid addiction.

DATES: Submit either electronic or written comments by June 21, 2022.

ADDRESSES: FDA is establishing a docket for public comment on this notice. The docket number is FDA-2022-N-0165. The docket will close on June 21, 2022. Submit either electronic or written comments by June 21, 2022. Please note that late, untimely filed comments will not be considered. Electronic comments must be submitted on or before June 21, 2022. The <https://www.regulations.gov> electronic filing system will accept comments until 11:59 p.m. Eastern Time at the end of June 21, 2022. Comments received by mail/hand delivery/courier (for written/paper submissions) will be considered timely if they are postmarked or the delivery service acceptance receipt is on or before that date.

You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- **Federal eRulemaking Portal:** <https://www.regulations.gov>. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to <https://www.regulations.gov> will be posted to the docket unchanged. Because your

comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on <https://www.regulations.gov>.

- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

Written/Paper Submissions

Submit written/paper submissions as follows:

- **Mail/Hand Delivery/Courier (for written/paper submissions):** Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

Instructions: All submissions received must include the Docket No. FDA-2022-N-0165 for "Providing Mail-Back Envelopes and Education on Safe Disposal With Opioid Analgesics Dispensed in an Outpatient Setting; Establishment of a Public Docket; Request for Comments." Received comments, those filed in a timely manner (see **ADDRESSES**), will be placed in the docket and, except for those submitted as "Confidential Submissions," publicly viewable at <https://www.regulations.gov> or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday, 240-402-7500.

- **Confidential Submissions—**To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states "THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION." The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the

claimed confidential information redacted/blacked out, will be available for public viewing and posted on <https://www.regulations.gov>. Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as "confidential." Any information marked as "confidential" will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: <https://www.govinfo.gov/content/pkg/FR-2015-09-18/pdf/2015-23389.pdf>.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to <https://www.regulations.gov> and insert the docket number, found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: Patrick Raulerson, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 6260, Silver Spring, MD 20993, 301-796-3522, Patrick.Raulerson@fda.hhs.gov.

SUPPLEMENTARY INFORMATION:

I. Background

Nonmedical use,¹ accidental exposure, and overdose associated with prescription opioid analgesics remain a serious problem in the United States. In 2019, prescription pain relievers, such as opioid analgesics, remained the most common class of prescription drugs used nonmedically in the United States, with approximately 9.7 million people aged 12 and older reporting past-year nonmedical use (Ref. 1). Many people who use opioids nonmedically start with prescription opioid analgesics and transition to illicit substances (Refs. 2 to 5). Also, from 2010 to 2018 there were over 48,000 accidental prescription opioid exposures in young children (Ref. 6).

While the volume of prescription opioid analgesics dispensed has been

¹ We use the term "nonmedical" in this document to refer to misuse of a drug, abuse of a drug, or both. "Misuse" is the intentional use, for therapeutic purposes, of a drug in a manner other than prescribed. "Abuse" is the intentional, non-therapeutic use of a drug, even once, for its desirable psychological or physiological effects.

trending downward following a peak in 2012, there were still an estimated 140.6 million prescriptions, resulting in an estimated 8.7 billion units (e.g., tablets or capsules) dispensed in 2021 from U.S. outpatient retail and mail order pharmacies (Ref. 7). As of 2020, despite the decrease in opioid dispensing, prescription opioids were involved in more than 16,000 fatal overdoses per year (Ref. 8), higher than the number seen at the peak of opioid analgesic dispensing in 2012 (Ref. 9). The lethality of co-involved substances, such as heroin, illicitly manufactured fentanyl, and illicitly manufactured fentanyl analogues has also changed since 2012 and may partly explain why overdose deaths involving opioid analgesics persist, despite the reductions in prescribing.

Patients commonly report having unused opioid analgesics after treatment of acute pain, such as pain following surgical procedures (Refs. 10 and 11). Opioid analgesics prescribed to treat chronic pain conditions can also result in unused drugs. When not properly disposed, these opioid analgesics provide opportunities for nonmedical use, accidental exposure, and overdose. Most people who reported past-year nonmedical use of prescription pain relievers obtained them through friends, relatives, or their own prescription (Ref. 1). Accordingly, FDA's efforts to address the opioid crisis include a focus on encouraging appropriate disposal of unused opioid analgesics.

The Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (SUPPORT Act) (Pub. L. 115–271), signed into law on October 24, 2018, provides FDA several new authorities to address the opioid crisis. The SUPPORT Act authorized FDA to require through a Risk Evaluation and Mitigation Strategy (REMS) that a safe disposal packaging or safe disposal system for the purposes of rendering the drug nonretrievable be dispensed to certain patients with opioids or other drugs that pose a serious risk of abuse or overdose if, among other things, FDA determines that such safe disposal packaging or system may mitigate such risks and is sufficiently available (21 U.S.C. 355–1(e)(4)).

The purpose of this notice is to seek public comment on the potential application of this authority to require, under the Opioid Analgesic (OA) REMS, that mail-back envelopes and education on safe disposal be provided with opioid analgesics dispensed in outpatient settings. We recognize that this is just one possible application of

FDA's new authorities in the Federal Food, Drug, and Cosmetic Act (FD&C Act) section 505–1(e)(4) (21 U.S.C. 355–1(e)(4)) related to packaging and disposal. We are considering, and invite comment on, other possible applications of these authorities, including novel packaging or other safe disposal options that would meet the SUPPORT Act standards. Furthermore, we actively encourage drug manufacturers and others to innovate in this space. We believe that the potential disposal requirement outlined below would provide patients and caregivers with a convenient additional option that would complement existing disposal options (e.g., take-back days, kiosks, flushing, and in-home disposal products). This potential requirement could be a significant and readily achievable step toward improving the safe use of opioid analgesics.

FDA is establishing this docket to solicit input from stakeholders on all aspects of this potential requirement under the OA REMS, including comments on specific questions posed in section III of this notice.

II. Mail-Back Envelopes Dispensed With Opioid Analgesics in an Outpatient Setting

In this section, we identify available data showing that many patients do not use all of their prescribed opioid analgesics. This well-documented outcome results in unused opioid analgesics that, if not securely stored, may be easily accessible and subject to nonmedical use, accidental exposure, and overdose. We summarize published literature regarding the potential impacts of in-home disposal options and whether they could increase disposal of unused opioid analgesics, especially when coupled with patient education on the importance of disposal. We then describe existing disposal options and programs, including take-back days, collection kiosks in pharmacies and other locations, flushing, in-home disposal, and mail-back envelopes. We also describe a potential requirement, as part of the OA REMS, that mail-back envelopes and education on safe disposal be provided with opioid analgesics dispensed in an outpatient setting.

A. Unused, Improperly Stored Opioids Provide an Easily Accessible Supply of Opioids for Nonmedical Use, Accidental Exposure, and Overdose

Many patients report having excess opioid analgesic tablets from prescriptions they received after surgical procedures. A systematic

review from 2017 reported that after seven common surgical procedures, 67 to 92 percent of patients had excess opioid analgesics (Ref. 11). A more recent systematic review that included articles published up to 2019 determined that, in studies of patient-reported use of opioid analgesics after surgical procedures that reported on unused tablets, most studies reported that 50 to 70 percent of tablets went unused (Ref. 10). Articles published since the last systematic review continue to report excess tablets after treatment of acute pain from surgical procedures or from treatment in emergency departments (Refs. 12 to 21).

Patients who are prescribed opioid analgesics to treat chronic pain may also have unused opioids requiring disposal, for example, when changing opioid therapy (new opioid ingredient or tablet strength), upon discontinuation of opioid therapy, or upon death. Removing unused opioids from a home is an important public health intervention as many studies report that patients frequently store opioid analgesic tablets in unsecure locations (Ref. 10), making them easily accessible for nonmedical use, accidental exposure, and overdose.

B. Provision of Education and In-Home Disposal Options May Increase Disposal of Unused Opioid Analgesics

Educating patients about opioid analgesic disposal options may increase the disposal rate² for unused opioids (Ref. 20). In a recent review of the literature examining opioid disposal options and practices, most studies found that fewer than 50 percent of patients disposed of their opioids (Ref. 20). The majority of studies that examined the effect of providing patient education on the rate of disposing of unused postoperative opioids found that patient education increased the disposal rate by 15 to 30 percent compared to patients who did not receive any additional education. Two investigations found that text message reminders also increased the disposal rate by approximately 30 percent in the text message reminder group compared to patients who did not receive reminders (Refs. 21 and 22).

There is also limited evidence that providing a disposal option along with education increased the probability of disposal over that of providing education alone. For example, one study assessed the difference in postoperative disposal rates when patients were

² The percent of patients who dispose of unused medications. This document specifically discusses disposal of opioid analgesic medications.

provided a take-home disposal method, patient education, or both (Ref. 23). Compared to usual care, either patient education or providing a take-home disposal method increased the disposal rate approximately 12 percent; for the group of patients who received both education and a take-home disposal method, the disposal rate increased by 19.5 percent. The four studies where a disposal kit was provided uniformly reported an increase in actual or planned disposal rates, and in three of four studies, the rates increased to over 50 percent of the study population (Refs. 23 to 26).

While disposal products provided to patients in these studies were often not specified, and the study populations usually received them after hospital encounters for surgical procedures, it is reasonable to assume that similar increases in disposal rates may also occur with mail-back envelopes and for other situations outside of post-surgical pain. What is less clear is whether education provided in a retail pharmacy setting will be as successful as the patient education provided in a post-surgical setting. We are interested in descriptions of programs that provide mail-back envelopes specifically, as well as those in which patient counseling on disposal is provided at retail pharmacies. In addition to program descriptions, we are interested in data on the effectiveness of mail-back envelope provision and counseling on disposal provided at retail pharmacies in increasing opioid analgesic disposal rates.

C. New REMS Authority Over Drug Disposal and Packaging

Section 3032 of the SUPPORT Act amended FDA's REMS authority. Specifically, as a part of a REMS, FDA may require that a drug for which there is a serious risk of an adverse event occurring from abuse or overdose be dispensed to certain patients with safe disposal packaging or a safe disposal system for purposes of rendering the drug "nonretrievable" (as that term is defined in a regulation adopted by the Drug Enforcement Administration (DEA)), if FDA determines that such safe disposal packaging or system may mitigate such serious risk and is sufficiently available (see section 505–1(e)(4) of the FD&C Act). Under DEA regulations (21 CFR 1317.90(a)), the requirement to render controlled substances "non-retrievable" applies only to DEA registrants and does not apply to ultimate users or patients.³ However, in the SUPPORT Act,

Congress made the "nonretrievable" standard applicable to any safe disposal packaging or system FDA may require under a REMS (see 21 U.S.C. 355–1(e)(4)). FDA may also require that a drug for which there is such serious risk be made available for dispensing to certain patients in unit-dose packaging, packaging that provides a set duration, or another packaging system that FDA determines may mitigate that risk (21 U.S.C. 355–1(e)(4)).

A packaging or disposal requirement under this provision can be imposed for prescription drugs that are the subject of applications approved under section 505(c) of the FD&C Act (21 U.S.C. 355(c)) or section 351 of the Public Health Service Act, as well as drugs that are the subject of abbreviated new drug applications (ANDAs) approved under section 505(j) of the FD&C Act if a packaging or disposal requirement is required for the applicable reference listed drug (see section 505–1(i)(1)(B) of the FD&C Act). FDA can permit packaging systems and safe disposal packaging or safe disposal systems for drugs that are the subject of ANDAs that are different from those required for the applicable reference listed drugs (see section 505–1(i)(2)(B) of the FD&C Act). FDA must take into consideration the burden on patients' access to the drug and the burden on the healthcare delivery system that would be associated with any such packaging or disposal requirement, and must consult with other relevant Federal Agencies with authorities over drug disposal packaging in certain circumstances (see section 505–1(e)(4) of the FD&C Act).

The DEA has defined "non-retrievable" through regulation (21 CFR 1300.05(b)). It means, in part, "the condition or state to which a controlled substance shall be rendered following a process that permanently alters that controlled substance's physical or chemical condition or state through irreversible means and thereby renders the controlled substance unavailable and unusable for all practical purposes." The regulation further provides that "a controlled substance is considered non-retrievable when it cannot be transformed to a physical or chemical condition or state as a controlled substance or controlled substance analogue," and that "the purpose of destruction is to render the controlled substance(s) to a non-retrievable state and thus prevent diversion of any such substance to illicit purposes" (21 CFR 1300.05(b)).

Under DEA regulations, an entity registered with the DEA⁴ may collect controlled substances from ultimate users, to include collection by mail-back packages or envelopes, for the purpose of destruction.⁵ To be considered "destroyed," a mail-back package must be destroyed in compliance with applicable Federal, State, tribal, and local laws and regulations and must be rendered non-retrievable.⁶ Mail-back envelopes dispensed with opioid analgesics pursuant to a mail-back program that operates in compliance with DEA regulations and all other applicable laws would be "for the purposes of rendering the drug nonretrievable," as required by section 505–1(e)(4) of the FD&C Act. There are multiple companies that operate DEA-registered mail-back programs and have mail-back envelopes commercially available, which could be utilized by drug manufacturers who would be subject to the potential REMS requirement described in this notice.

D. Mail-Back Envelopes in the Current Landscape of Opioid Disposal Options

There are various options for safely disposing of opioid analgesics available to patients, all of which can achieve the goal of removing the risks associated with having unused and unsecured opioids stored in the home. There are both in-home disposal options (e.g., flushing, commercially available in-home disposal products) and disposal options outside of the home (i.e., collection kiosks, take-back events). FDA currently recommends disposing of opioids in permanent collection sites (e.g., kiosks in pharmacies) or at take-back events (Ref. 27). If these disposal options are not readily available, FDA recommends either flushing (for opioids on FDA's "Flush List" (Ref. 28) or mixing with an unpalatable substance and disposing in household trash (Ref. 27).

However, each option has its own challenges, which can result in individuals being unable, unwilling, or reluctant to use them. For example, collection sites (e.g., kiosks) require

⁴ Manufacturers, distributors, reverse distributors, narcotic treatment programs, hospitals/clinics with an onsite pharmacy, and retail pharmacies that desire to be collectors shall modify their registration to obtain authorization to be a collector (21 CFR 1317.40(a); 1301.51). A collector would need to submit a letter of request for modification of their registration to the Registration Unit at the DEA and include the registrant's name, address, registration number, and the type of collection (e.g., a mail-back program and/or a collection receptacle) that the collector intends to conduct.

⁵ DEA regulations address take-back events, mail-back programs, and collection receptacles (21 CFR 1317.65, 1317.70, and 1317.75, respectively).

⁶ 21 CFR 1317.90(a).

³ 79 FR 53520 at 53541, September 9, 2014.

individuals to bring opioid analgesics out of the home to a public place, either a pharmacy or law enforcement facility. This requires planning, access to transportation, and follow-through. Some individuals are unable to readily or easily travel to a collection site. In addition, some individuals may be reluctant to bring opioid analgesics to a public location due to social stigma, or may fear entering law enforcement locations, especially while carrying opioid analgesics.

In-home disposal options also have challenges. Many patients are reluctant to flush opioids (or other medications) due to environmental concerns (Ref. 28). FDA's recommendation to mix some opioids (*i.e.*, those not on the "flush list") with an unpalatable substance and dispose in household trash is a multistep process some patients may be unwilling or reluctant to undertake. In addition, disposal of opioids in household trash may not prevent all accidental exposures.

Commercially available in-home disposal products (*e.g.*, DisposeRx packets or Deterra kits) commonly dispensed by some pharmacies are another option, but they also require multiple steps (*e.g.*, emptying pills from one container into another container, adding water, shaking to mix contents, disposing in household trash) (Refs. 29 to 31), and some individuals may be reluctant to use them due to environmental concerns. Further, FDA's understanding is that these products may not render drugs "nonretrievable" within the meaning of the DEA regulation referenced in section 505–1(e)(4)(B). Mail-back envelopes require individuals to put the mail-back envelopes in a mailbox, which, for some individuals, may be physically distanced from their home (*e.g.*, apartments, P.O. boxes, Native American reservations). Additionally, patients may be reluctant to put opioids in the mail for fear of diversion (Ref. 32). Some individuals may be more inclined to use one option; others a different option. Accordingly, FDA believes it is important to provide patients with a range of reasonable options, and to provide appropriate education on each of these options.

FDA is aware that many organizations, both public and private, have ongoing efforts to increase safe disposal of unused opioids. For example, large retail pharmacy chains and many independent pharmacies operate drug disposal programs that include making drug disposal kiosks available in pharmacies, sponsoring drug "take-back" days and providing in-home disposal products (Refs. 33 to 37).

It is our understanding that pharmacists often are instructed to counsel patients and include educational materials about safe disposal in conjunction with providing in-home disposal products. Some States and municipalities have passed legislation requiring manufacturers who sell drugs in their jurisdictions to fund drug disposal programs that can include subsidizing kiosks in pharmacies and/or the provision of in-home disposal products, including, occasionally, mail-back envelopes (Refs. 38 to 40).

The Agency believes it is important for patients to have multiple options for disposing of unused opioids, including kiosks, take-back events, and in-home disposal options. Mail-back envelopes are one option that has multiple favorable characteristics. They do not require patients to mix medications with water, chemicals, or other substances. Mail-back envelopes are also required to be postage paid,⁷ thereby providing patients with a free disposal option. Further, most patients can mail these envelopes from their home. Additionally, the DEA and the U.S. Postal Service (USPS) have regulations and policies to ensure that mail-back envelopes are fit for purpose.⁸ The USPS has longstanding policies in place to safely and securely transport mail-back envelopes to the location where they will be destroyed.⁹ Finally, unlike other alternatives described here, the DEA requires mail-back envelopes to be disposed of in a manner that renders them non-retrievable,¹⁰ which is typically accomplished through incineration. As a result, mail-back envelopes (along with collection kiosks) result in less opioids in the water supply and landfills than is associated with other disposal options.

FDA recognizes that, notwithstanding these benefits, mail-back envelopes are, at present, relatively underutilized. Large retail pharmacy chains have focused on take-back days, kiosks, and a provision of commercially available in-home disposal products (Refs. 33 to 37), while it appears manufacturers subject to State-mandated disposal

requirements have primarily focused on collection kiosks. FDA anticipates that a REMS-mandated disposal program for opioid analgesics focused on provision of mail-back envelopes, together with education on multiple safe disposal options, could complement these existing opioid disposal programs.

E. Approach Under Consideration: Mail-Back Envelopes and Education on Proper Disposal Must Be Provided to Patients With Opioid Analgesics Dispensed in Outpatient Pharmacies

FDA is considering adding a mail-back envelope requirement to the OA REMS to require that all opioid analgesics, including immediate-release (IR), extended-release (ER), and long-acting (LA) formulations, used in the outpatient setting that are subject to the OA REMS be dispensed with mail-back envelopes.

Although most studies reported excess opioid analgesics after a surgical procedure (Refs. 10 and 11), suggesting the need to target disposal options for patients with acute pain, the pharmacist at the time of dispensing may find it difficult to differentiate whether a patient is being treated for acute or chronic pain. For example, using specific formulations of opioid analgesics as a proxy for distinguishing between acute or chronic pain would not be appropriate because patients with chronic pain may take both IR and ER or LA formulations. In fact, most patients receiving an opioid analgesic, regardless for how long, use IR formulations (Ref. 41). Further, as mentioned above, opioid analgesics prescribed for chronic pain can also become unneeded. Therefore, FDA is considering having any mail-back envelope requirement apply to all opioid analgesics, including IR, ER, and LA formulations, used in the outpatient setting for acute or chronic pain that are subject to the OA REMS.

That said, requiring that a mail-back envelope be dispensed with every opioid analgesic prescription could be inefficient and lead to an excess of dispensed mail-back envelopes. The use of algorithms to target mail-back envelope distribution in a thoughtful, tailored manner would be expected to positively impact program fidelity and outcomes and decrease waste. Some existing retail pharmacy programs that provide disposal options to patients use algorithms to target disposal options to certain patients or certain circumstances, such as only providing disposal options every 6 months to patients who continue to fill multiple opioid analgesic prescriptions (Refs. 33 and 34). Other potential algorithms

⁷ 21 CFR 1317.70(c)(4). DEA added this requirement because it believed that "pre-paid postage will ensure that the package is not returned to sender, which will help reduce its handling and therefore, the diversion risks" (79 FR 53520 at 53536, September 9, 2014).

⁸ See 21 CFR 1317.70; USPS Publication 52, Mail-back programs.

⁹ Mail-back collectors are required to provide mail recipients with readymade packaging and labels that comply with USPS regulations for mailing controlled substances, including unique Intelligent Mail package barcodes. See USPS Publication 52, Mail-back programs.

¹⁰ See 21 CFR 1317.70(a); 1317.90(a).

could target the provision of mail-back envelopes to patients filling a prescription for an amount of opioids generally consistent with acute pain treatment, or to patients with a change in dose of a recurring opioid analgesic prescription who may then have unused opioids. FDA recognizes that the upfront effort to implement algorithms could be complicated but expects that the use of algorithms would be more efficient and would reduce the long-term burden on the healthcare delivery system by targeting the distribution of mail-back envelopes to patients most likely to have unused opioids. FDA would appreciate input on appropriate optimal algorithm design for a potential targeted mail-back envelope provision. We would also expect, regardless of the algorithm used, that mail-back envelopes would be provided to any patient or caregiver who requests one. Additionally, we would expect that if a given patient does not want the mail-back envelope, they could decline the offer.

Multiple studies we reviewed indicated that unused opioids are often stored in unsecure locations (Ref. 10) and that patients were reluctant to dispose of unused opioid analgesics for various reasons, including the patient's belief that they might need the unused opioids in the future (Refs. 32, 42, and 43). In the studies that we reviewed, patient and caregiver education about disposal was often provided with an at-home disposal option during counseling about care after a procedure, and patients were reminded about disposal during followup contacts. For example, one study found that combining an in-home disposal option with patient education focused on the importance of disposal increased the disposal rate versus simply providing an in-home disposal option or patient education (Ref. 23). Accordingly, we believe that patient and caregiver education that explains the importance of safe storage and proper disposal and addresses patients' reluctance to dispose of opioids would be an integral component of any mail-back envelope REMS requirement. We also believe that take-home educational materials on proper disposal, as well as followup reminders (e.g., automated text messages), are likely to have a positive reinforcing effect on patient counseling provided by the pharmacist at the time of dispensing.

There are multiple ways a mail-back envelope REMS requirement could be designed and operationalized. We describe two possibilities here, and welcome input on others. One option would be to require that drug

manufacturers subject to the OA REMS make mail-back envelopes available to outpatient pharmacies at no cost and allow pharmacies to provide mail-back envelopes and counseling on disposal according to their own policies and procedures. Additionally, to encourage patient education, FDA may also require manufacturers to create educational materials to assist pharmacists in counseling patients on safe storage and proper disposal. However, this option would not require that pharmacies actually provide mail-back envelopes, counseling on disposal, or take-home educational materials. As such, this option would ultimately rely on pharmacy policies and procedures to drive the use of mail-back envelopes and counseling on safe disposal.

Alternatively, FDA could require manufacturers to only distribute opioids to outpatient pharmacies certified in the REMS. Certification could require that mail-back envelopes, patient counseling, take-home materials, and followup reminders (e.g., text messages) be provided according to the terms of the REMS, and that all of these activities be conducted and appropriately documented. Again, manufacturers would supply mail-back envelopes to pharmacies at no cost. Certification of pharmacies could include requiring pharmacy staff to complete specified training on how to counsel patients on safe storage and proper disposal. As with the first option, FDA may also require manufacturers to create educational materials to assist pharmacies with patient counseling.

For any mail-back envelope REMS requirement, FDA would intend for the program to increase the quantity of unused opioids properly disposed of, and, therefore, to decrease the quantity of unused opioids available for nonmedical use, accidental exposure, and overdose. FDA anticipates the potential for greater impact with the second option than the first but acknowledges that the second option would impose greater burdens on the healthcare system.

The potential burdens associated with a mail-back envelope REMS requirement on pharmacies and pharmacists would include, depending on the program design: (1) Completion of any REMS-mandated training and certification; (2) implementation of REMS-compliant processes in pharmacies; and (3) documentation of compliance with REMS requirements by pharmacies. These efforts are in addition to existing State and Federal pharmacy requirements associated with dispensing opioids (e.g., checking prescription drug monitoring programs).

A mail-back envelope REMS requirement is likely to be more effective under the second scenario described above. However, the more requirements the REMS imposes, the more likely that relevant stakeholders, particularly pharmacies, will have challenges complying with the requirements. Ensuring the requirements are met may necessitate remediation steps, such as reeducation, or even decertification, if a pharmacy fails to comply. Declining to certify or decertifying a pharmacy could affect patients' access to appropriately prescribed opioid analgesics.

Accordingly, the ability of potential OA REMS disposal requirements to be integrated into healthcare providers' existing workflow is an important consideration in FDA's decision making. The Agency is seeking input on the design of a potential mail-back envelope REMS requirement that strikes the right balance between positive impact on unused opioid analgesic disposal and burden on pharmacies and other stakeholders.

F. Other Considerations for Requiring Provision of Mail-Back Envelopes With Opioid Analgesics

Current DEA and USPS regulations and policies require mail-back envelopes to be nondescript, *i.e.*, they must not include any markings or other information that might indicate that the package contains controlled substances.¹¹ These specifications help alleviate concerns that mail-back envelopes can easily be identified for diversion while in transit. However, if a potential mail-back envelope REMS requirement were implemented, it could be expected to greatly increase the number of mail-back envelopes in circulation. The USPS has informed the Agency that the existing regulatory scheme, as well as USPS' rigorous monitoring and policing mechanisms, should be adequate to accommodate an increase in mail-back envelope utilization. We welcome other stakeholder views on this issue, including how any potential adverse consequences could be mitigated.

FDA expects that a mail-back envelope OA REMS requirement would provide patients with an additional disposal option that complements disposal options already available through ongoing public and private efforts. The Agency understands mail-back envelopes will not be the preferred disposal option for all patients. FDA's expectation is that existing disposal

¹¹ 21 CFR 1317.70(c)(1); USPS Publication 52, Mail-back programs.

programs (e.g., provision of in-home disposal options by many pharmacies, including most major chain pharmacies) will continue, such that a mail-back envelope mandate would provide patients with an additional disposal option without affecting other existing disposal options. We are seeking input on how a mail-back envelope OA REMS requirement could be designed and operationalized to complement existing disposal efforts and programs.

G. Other Actions That Could Complement a Mail-Back Envelope REMS Mandate

FDA is considering additional actions that may be necessary or appropriate if we were to impose a mail-back envelope disposal requirement under the OA REMS. For example, FDA would need to amend recommendations in the “Remove the Risk” campaign on safe disposal of opioids to include information on the availability and use of mail-back envelopes (Ref. 44). Likewise, FDA would need to amend the information on disposal in FDA-approved prescriber and patient labeling for opioids that would be subject to the mail-back envelope REMS requirement, as this labeling currently does not mention mail-back envelopes. FDA is also considering whether it might be appropriate to have a large media campaign aimed at increasing public awareness of the importance of promptly disposing unused opioids and how to safely dispose of them. FDA welcomes input on these and any other potential actions that could increase the effectiveness of a mail-back envelope disposal requirement under the OA REMS.

III. Additional Request for Comments And Information

FDA is soliciting comments from stakeholders regarding all aspects of the potential mail-back envelope REMS mandate described in this document. The Agency is particularly interested in comments on the following topics:

1. The potential safety advantages and public health impacts of providing mail-back envelopes with opioid analgesics dispensed in an outpatient setting.
2. Whether there are specific opioid analgesic drug products for which requiring mail-back envelopes is more important from a public health perspective and, if so, which products.
3. How pharmacies could identify those patients who are most likely to have unused opioids to optimize provision of mail-back envelopes to these patients and potentially positively impact the share of mail-back envelopes

that are utilized to safely dispose of opioid analgesics.

4. How pharmacies could develop and implement algorithms to determine when to provide a mail-back envelope, including how feasible or practical it would be for pharmacies to do so.

5. Whether requiring provision of mail-back envelopes under the OA REMS should also include a requirement for patient counseling and/or provision of take-home materials on safe disposal at the point of dispensing.

6. What key educational messages regarding secure storage and safe disposal should be included in any patient education component of the potential OA REMS requirement described in this notice, including educational messages to increase uptake and use of mail-back envelopes, as well as what form that education should take (e.g., handouts, pharmacist counseling of patients).

7. How a mail-back envelope requirement could be designed and implemented to help ensure that the disposal requirement minimizes burden on pharmacies while still providing the public health benefit. As discussed in the document, there is a tradeoff between the potential effectiveness of a mail-back envelope REMS requirement and the level of burden imposed on those pharmacies involved in implementing the requirement.

8. Possible challenges, including technical and logistical challenges, with the potential REMS mandate described in this notice, and what factors could impact manufacturers’ ability to provide mail-back envelopes to pharmacies, or the ability of pharmacies to dispense mail-back envelopes and provide appropriate disposal education to consumers.

9. The impact of a mail-back envelope REMS requirement on other stakeholders, including manufacturers, prescribers, payers, and patients.

10. How a mail-back envelope REMS requirement could be designed and operationalized to provide another option for patients that would complement current pharmacy disposal programs, policies, and procedures, as well as Federal, State, local, and private sector efforts on proper opioid disposal.

11. Possible negative impacts of a potential mail-back envelope REMS mandate, including whether there is a risk that it could diminish the impact of other public and private efforts around safe disposal. For example, could it be the case that for some patients, provision of a mail-back envelope together with another commercially available in-home disposal product, and education on how to use both, could be

overwhelming and lead to less comprehension and utilization of either option?

12. How manufacturers and FDA could best assess the effectiveness of a mail-back envelope OA REMS requirement. Assessing the impact of a mail-back envelope requirement in a REMS is likely to be challenging because, among other reasons, current DEA regulations prohibit mail-back envelopes from being opened prior to destruction, preventing a direct inventory of contents; and some of the opioids disposed of in mail-back envelopes would presumably be disposed of using another disposal option if the mail-back envelope were not provided.

13. How patients and others may perceive the environmental impact of a potential mail-back envelope requirement, including the potential for such envelopes to reduce the amount of medications flushed or disposed of in landfills.

14. Any existing programs that provide mail-back envelopes, especially programs that provide patient counseling on disposal and that operate in retail pharmacies, including any data on the effectiveness of these programs.

15. Section 3032 of the SUPPORT Act authorizes the Agency to use its REMS authority to require that a safe disposal packaging or safe disposal system for the purposes of rendering the drug nonretrievable be dispensed to certain patients with drugs that pose a serious risk of abuse or overdose if, among other things, FDA determines that such safe disposal packaging or system may mitigate such risks and is sufficiently available (21 U.S.C. 355–1(e)(4)). We recognize that the approach described in this document is only one potential use of the Agency’s REMS authority concerning disposal. Comment on other possible uses of the Agency’s REMS authority concerning disposal, including providing any data or information about whether other disposal packaging or disposal systems we might consider mandating, such as commercially available in-home disposal products, would satisfy the statutory requirements at 21 U.S.C. 355–1(e)(4).

16. Discuss other actions FDA could take in addition to, and in support of, a mail-back envelope disposal REMS requirement to increase safe disposal of unused opioid analgesics.

IV. References

The following references marked with an asterisk (*) are on display at the Dockets Management Staff (see **ADDRESSES**) and available for viewing by

interested persons between 9 a.m. and 4 p.m., Monday through Friday; they also are available electronically at <https://www.regulations.gov>. References without asterisks are not on public display at <https://www.regulations.gov> because they have copyright restriction. Some references may be available at the website address, if listed. References without asterisks are available for viewing only at the Dockets Management Staff. FDA has verified the web addresses, as of the date this document publishes in the **Federal Register**, but websites are subject to change over time.

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medicines/safe-opioid-disposal-remove-risk-outreach-toolkit. Accessed November 23, 2021.

Dated: April 13, 2022.

Lauren K. Roth,

Associate Commissioner for Policy.

[FR Doc. 2022–08372 Filed 4–20–22; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Dental & Craniofacial Research; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Dental and Craniofacial Research Special Emphasis Panel; Summer Research Education R25 and DSR Member Conflict SEP.

Date: June 17, 2022.

Time: 11:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institute of Dental & Craniofacial Research, 6701 Democracy Blvd., Bethesda, MD 20817 (Virtual Meeting).

Contact Person: Aiwu Cheng, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Activities National Institute of Dental & Craniofacial Research, National Institutes of Health, 6701 Democracy Blvd., Bethesda, MD 20892, Aiwu.cheng@nih.gov.

(Catalogue of Federal Domestic Assistance Program No. 93.121, Oral Diseases and Disorders Research, National Institutes of Health, HHS)

Dated: April 18, 2022.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–08522 Filed 4–20–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Center for Scientific Review Special Emphasis Panel; Health Services Organization, Delivery, Quality and Effectiveness.

Date: May 4, 2022.

Time: 11:00 a.m. to 1:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Wenjuan Wang, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3154, Bethesda, MD 20892, (301) 480–8667, wangw22@mail.nih.gov.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: April 15, 2022.

Tyeshia M. Roberson-Curtis,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–08500 Filed 4–20–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Center for Scientific Review; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Bioengineering Sciences & Technologies Integrated Review Group; Biodata Management and Analysis Study Section.

Date: June 2–3, 2022.

Time: 9:00 a.m. to 8:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: E. Bryan Crenshaw, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480–7129, bryan.crenshaw@nih.gov.

Name of Committee: Risk, Prevention and Health Behavior Integrated Review Group; Psychosocial Development, Risk and Prevention Study Section.

Date: June 2–3, 2022.

Time: 9:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Anna L. Riley, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3114, MSC 7759, Bethesda, MD 20892, 301–435–2889 rileyann@csr.nih.gov.

Name of Committee: Cell Biology Integrated Review Group; Biology and Development of the Eye Study Section.

Date: June 2–3, 2022.

Time: 10:00 a.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Rockledge II, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Kevin Czaplinski, Ph.D., Scientific Review Officer, Center for Scientific Review, 6701 Rockledge Drive, Bethesda, MD 20892, (301) 480–9139, czaplinskik2@csr.nih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.306, Comparative Medicine; 93.333, Clinical Research, 93.306, 93.333, 93.337, 93.393–93.396, 93.837–93.844, 93.846–93.878, 93.892, 93.893, National Institutes of Health, HHS)

Dated: April 15, 2022.

Tyeshia M. Roberson-Curtis,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–08501 Filed 4–20–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Dental & Craniofacial Research; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: NIDCR Special Grants Review Committee.

Date: June 23–24, 2022.

Time: 9:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institute of Dental & Craniofacial Research, 6701 Democracy Boulevard, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Nisan Bhattacharyya, Ph.D., Scientific Review Officer, Scientific Review Branch, National Institute of Dental & Craniofacial Research, National Institutes of Health, 6701 Democracy Boulevard, Suite 668, Bethesda, MD 20892, 301–451–2405, nisan.bhattacharyya@nih.gov.

(Catalogue of Federal Domestic Assistance Program No. 93.121, Oral Diseases and Disorders Research, National Institutes of Health, HHS)

Dated: April 18, 2022.

Melanie J. Pantoja,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2022–08521 Filed 4–20–22; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Substance Abuse and Mental Health Services Administration

Notice of Meeting

Pursuant to Public Law 92–463, notice is hereby given that the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Prevention's (CSAP) Drug Testing Advisory Board (DTAB) will convene via web conference on June 21st, 2022, from 10:00 a.m. EDT to 4:30 p.m. EDT, and June 22nd, 2022, from 10:00 a.m. EDT to 1:00 p.m. EDT.

The board will meet in open-session June 21st, 2022, from 10:00 a.m. EDT to 2:15 p.m. EDT to discuss the Mandatory Guidelines for Federal Workplace Drug Testing Programs, updates on the Drug Free Workplace Program as well as updates from the Department of Transportation, the Nuclear Regulatory Commission, a presentation by Dr. Barry Sample on Workforce Drug Testing for Marijuana in 2021, and a presentation by Dr. Svante Vikingsson on Hydroxy Cocaine and Cocaine Ratios in Hair.

The board will meet in closed-session on June 21st, 2022, from 2:45 p.m. EDT to 4:30 p.m. EDT and June 22nd, 2022, from 10:00 a.m. EDT to 1:00 p.m. EDT, to discuss confidential issues surrounding the proposed Mandatory Guidelines for Federal Workplace Drug Testing Programs (hair), preliminary and unpublished studies on hydroxy cocaine and cocaine ratios in hair, studies on quantitative agreement in hair labs, and oral fluid topical solution data from the Johns Hopkins University Behavioral Pharmacology Research Unit (BPRU). Therefore, the June 21st, 2022, from 2:45 to 4:30 and June 22nd, 2022, from 10:00 a.m. EDT to 1:00 p.m. EDT meetings are closed to the public, as determined by the Assistant Secretary for Mental Health and Substance Use, SAMHSA, in accordance with 5 U.S.C. 552b(c)(4) and (9)(B), and 5 U.S.C. App. 2, Section 10(d).

Meeting registration information can be completed at <http://snacregister.samhsa.gov/MeetingList.aspx>. Web conference and call information will be sent after completing registration. Meeting information and a roster of DTAB members may be obtained by accessing the SAMHSA Advisory Committees website, <https://www.samhsa.gov/about-us/advisory-councils/meetings> or by contacting the Designated Federal Officer, Lisa Davis.

Committee Name: Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention, Drug Testing Advisory Board

Dates/Time/Type: June 21st, 2022, from 10:00 a.m. EDT to 2:15 p.m. EDT: OPEN,

June 21st, 2022, from 2:45 p.m. EDT to 4:30 p.m. EDT: CLOSED,

June 22nd, 2022, from 10:00 a.m. EDT to 1:00 p.m. EDT: CLOSED

Place: Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Rockville, MD 20857

Contact: Lisa S. Davis, M.S., Social Science Analyst, Center for Substance Abuse Prevention, 5600 Fishers Lane, Rockville, Maryland 20857, Telephone: (240) 276-1440, Email: Lisa.Davis@samhsa.hhs.gov.

Anastasia Marie Donovan,

Public Health Advisor, Division of Workplace Programs.

[FR Doc. 2022-08479 Filed 4-20-22; 8:45 am]

BILLING CODE 4162-20-P

DEPARTMENT OF HOMELAND SECURITY

[Docket Number DHS-2022-0018]

Agency Information Collection Activities: REAL ID Applicant Information and Documentation

AGENCY: Department of Homeland Security (DHS).

ACTION: 60-Day notice and request for comments.

SUMMARY: The Department of Homeland Security, will submit the following Information Collection Request (ICR) to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted until June 21, 2022. This process is conducted in accordance with 5 CFR 1320.1.

ADDRESSES: You may submit comments, identified by docket number Docket #DHS-2022-0018 at:

○ *Federal eRulemaking Portal:* <http://www.regulations.gov>. Please follow the instructions for submitting comments.

Instructions: All submissions received must include the agency name and docket number Docket #DHS-2022-0018. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or

comments received, go to <http://www.regulations.gov>.

SUPPLEMENTARY INFORMATION: The REAL ID Act of 2005 (the Act) prohibits Federal agencies from accepting State-issued drivers' licenses or identification cards for any official purpose—defined in the Act and regulations to include accessing federal facilities, boarding federally regulated commercial aircraft, and entering nuclear power plants—unless the license or card is issued by a State that meets the requirements set forth in the Act. The REAL ID regulations, which DHS issued in January 2008, establish the minimum standards that States must meet to comply with the Act. DHS has a separate collection of information related to DHS interaction with States, *e.g.*, State certification (see OMB Control No. 1601-0005). By contrast to that collection of information, this collection of information relates to the States' collection of information from driver's license applicants.

Initial Information and Documentation

The Act and regulations also prescribe the documents and information an individual must present as proof of identity and lawful status when applying for a REAL ID compliant license or identification card. This includes information and documentation establishing a person's identity, date of birth, social security number, residence address, and evidence of U.S. citizenship or lawful status in the United States. Additionally, states may permit an applicant to establish a name other than the name that appears on a source document but must require evidence of the name change through presentation of documents issued by a court, governmental body or other entity as determined by the state. The costs of these activities are one-time costs because they accrue as part of the initial issuance process only.

Reissuance and Renewal

With certain exceptions, the REAL ID regulations generally permit an applicant to renew or obtain a reissued replacement REAL ID license or identification card remotely and without presenting additional documentation or information. States may not, however, remotely renew or reissue a replacement license or identification card where there has been a material change in any personally identifiable information since the prior issuance. In such cases, an applicant must present documentation establishing the material change. The

regulations also require applicants to renew their REAL ID licenses and identification cards in-person at least once every sixteen years. Additionally, holders of temporary or limited-term REAL ID driver's licenses and identification cards must present evidence of continued lawful status when renewing their license or identification card.

In addition to requiring applicants to present certain identity and lawful status documentation and information as described in paragraph 1 above, the REAL ID Act and regulations require states to verify and retain copies of that information. These requirements help states to ensure the authenticity of an applicant's information and reduce opportunities for fraud in the application and document issuance process. The regulations specifically require states to verify identity and lawful status information and documentation presented by an applicant to ensure (1) the source document provided is genuine and has not been altered ("document authentication"), and (2) the identity data contained on the document is valid ("data verification"). States must verify documents and information provided by an applicant with the issuer of the document and use electronic validation systems as they become available for use. For example, to verify an applicant's lawful status in the United States, the regulations require states to verify a document issued by the Department of Homeland Security through the use of the Systematic Alien Verification for Entitlements (SAVE) system or alternate method approved by DHS. Similarly, states must verify documents issued by the U.S. Department of State, including U.S. passports, with the Department of State, social security information with the Social Security Administration, and birth certificates using the Electronic Verification of Vital Events (EVVE) system or other electronic system when the records are available. The regulations also require state department of motor vehicle employees who are involved in the handling of an applicant's source documents or who are engaged in the issuance of driver's licenses and identification cards to undergo periodic fraudulent document recognition training and security awareness training. The Act and regulations also require states to retain copies of the application, declaration, and source documents, including documents establishing name changes for either seven years or ten years depending on whether the documents

are retained electronically or in paper format.

Applicants for REAL ID licenses and identification cards generally submit their documentation and information in-person at a state DMV office. During the application process the state will review and make copies of an applicant's information, collect the completed application, take the applicant's photograph, and obtain a declaration that the information presented is true and correct. Although this transaction generally occurs in-person, DHS has provided guidance authorizing states to allow applicants to pre-submit identity and lawful status source documents through a secure electronic process in advance of an in-person DMV visit at which time the applicant would physically present those same documents for authentication and verification by DMV personnel. States that utilize this process have indicated that it helps to ensure an applicant has the correct information and reduces customer wait times by allowing the state to electronically copy the information in advance of the visit.

In December 2020, Congress enacted the REAL ID Modernization Act, which includes provisions that would allow states to accept applicant information through electronic transmission methods following the DHS issuance of regulations and state certification that they comply with those regulations. DHS is in the process of developing regulations to implement this provision, which when implemented by the state could help to reduce the burden's associated with an in-person DMV visit to obtain a REAL ID compliant license or identification card.

The information collection discussed in this analysis applies to applicant's for REAL ID licenses and identification cards. Therefore, it is DHS's belief that the information collection does not have a significant impact on a substantial number of small businesses.

Without the presentation, verification, and retention of applicant identity and lawful status documentation and information, states would be unable to comply with REAL ID requirements. As a consequence, individuals would be unable to use their state-issued driver's license or identification card for REAL ID official purposes.

The Office of Management and Budget is particularly interested in comments which:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected; and

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submissions of responses.

Analysis

Agency: Department of Homeland Security (DHS).

Title: REAL ID Applicant Information and Documentation.

OMB Number: 1601-NEW.

Frequency: Annually.

Affected Public: Public.

Number of Respondents: 89,958,000.

Estimated Time per Respondent: 2.42.

Total Burden Hours: 34,887,000.

Robert Dorr,

Acting Executive Director, Business Management Directorate.

[FR Doc. 2022-08509 Filed 4-20-22; 8:45 am]

BILLING CODE 9112-FL-P

DEPARTMENT OF HOMELAND SECURITY

[Docket Number DHS-2022-0020]

Agency Information Collection Activities: Migrant Protection Protocols (MPP) Disenrollment Request System

AGENCY: Department of Homeland Security (DHS).

ACTION: 5-Day notice and request for comments.

SUMMARY: The Department of Homeland Security, will submit the following Information Collection Request (ICR) to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted until April 26, 2022. This process is conducted in accordance with 5 CFR 1320.1.

ADDRESSES: You may submit comments, identified by docket number Docket #DHS-2022-0020, at:

○ *Federal eRulemaking Portal:* <http://www.regulations.gov>. Please follow the instructions for submitting comments.

Instructions: All submissions received must include the agency name and

docket number Docket #DHS-2022-0020. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>.

SUPPLEMENTARY INFORMATION: The Department of Homeland Security (DHS) Headquarters (HQ) Migrant Protection Protocols (MPP) program is a U.S. Government program, initiated in January 2019 pursuant to Section 235(b)(2)(C) of the Immigration and Nationality Act (INA). Under MPP, the United States returns to Mexico certain citizens and nationals of countries in the Western Hemisphere other than Mexico while their U.S. removal proceedings are pending.

On June 1, 2021, the Secretary of Homeland Security determined that MPP should be terminated and issued a memorandum to that effect. On August 13, 2021, however, the U.S. District Court for the Northern District of Texas determined in *Texas v. Biden* that the June 1, 2021 memo was not issued in compliance with the Administrative Procedure Act and INA and ordered DHS to "enforce and implement MPP in good faith." See *Texas v. Biden*, No. 2:21-cv-067, 2021 WL 3603341 (N.D. Tex. Aug. 13, 2021).

On October 29, 2021, after an extensive and comprehensive review, the Secretary of Homeland Security issued a new memorandum terminating MPP, which DHS will implement as soon as practicable after issuance of a final judicial decision to vacate the Texas injunction. Until that time, the Department continues to comply with the Texas injunction requiring good-faith implementation and enforcement of MPP. To carry out the court order requiring good-faith implementation and enforcement of MPP, the Department is proposing a new data collection. To achieve efficiencies and ensure consistency with MPP guidance, DHS seeks to create a public-facing MPP Disenrollment Request website.

All information entered by individuals into the MPP Disenrollment Request System will be used by DHS employees and staff to determine whether, consistent with DHS MPP guidance, an individual should be disenrolled from MPP. Decisions whether to enroll or disenroll individuals from MPP are at DHS's discretion, and the disenrollment request process does not create any obligation or private right of action enforceable in administrative or judicial

proceedings. Information submitted will be used to ensure that enrollments are consistent with DHS MPP guidance.

DHS anticipates individual review requests will primarily fall into the following categories:

1. An MPP enrollee believes they meet one of the criteria that should counsel in favor of their exemption and therefore should not have been placed in the program.

2. An MPP enrollee was not given access to a *non-refoulement* interview and wished to have one.

3. An MPP enrollee has experienced a materially changed circumstance such that they now may meet one of the criteria that should counsel in favor of their exception from MPP or may now be able to establish a reasonable possibility of persecution or torture if they were to receive a *non-refoulement* interview.

The purpose of the public facing MPP Disenrollment Request website is to provide an avenue for individuals to initiate a request for disenrollment from MPP should they believe they should not be included in the MPP program. The website will also provide additional information to the users as well. Once an individual has provided information, the government will have the ability to determine whether an individual is incorrectly placed in MPP processing. The information to be collected for self-disclosure is listed below.

Submission Information

Attorney or Representative Email

Attorney or Representative Name

Attorney or Representative Phone Number

Attorney or Representative Country Code

A #Number

Best Phone Number

E-mail Address

First, Middle, and Last Name

Date of Birth

Country of Birth

County of Citizen Citizenship

Where are you (MPP enrolled person) located now? (Country, City, State)

Preferred Language

Reason for MPP review

Preparer Name

Preparer Phone Number

Preparer Email

Preparer Relationship to Enrollee

DHS will launch a public-facing website on *DHS.gov* for MPP enrollees or representatives acting on their behalf to submit requests. The information on the application will include instructions for submission. Information about the portal will be made available via a tear sheet given to enrollees at the time they are enrolled in MPP. The MPP Disenrollment Request system URL (*engage.dhs.gov/mpp*) will also be searchable on the *DHS.gov* website.

The public-facing website, which is being developed with assistance from the Department of Homeland Security Office of the Chief Information Officer (OCIO), will employ various cloud-based services (e.g., ServiceNow15 and Akamai16 for cloud security and content delivery) to effectively and efficiently manage the receipt, creation, assignment, tracking, and storage of the self-disclosure of the necessary information to start the MPP Disenrollment Request process. The website is hosted in the Federal Risk and Authorization Management Program (FedRAMP)-certified cloud and provides accessibility and functionality restrictions to define specific user roles through its ServiceNow infrastructure. Each user role has defined and limited access authority to view and edit data sets by Office of the Chief Information Officer master administrators.

While the MPP Disenrollment Request system is under development, enrollees may submit their request for review via email at *MPPRequest@hq.dhs*. With the roll out of the MPP Disenrollment Request application, the email request process will be closed. This information collection does not have an impact on small businesses or other small entities.

The lack of a public-facing platform to initiate requests for disenrollment from MPP could adversely impact DHS's ability to ensure that enrollments in MPP are consistent with DHS guidance and to timely respond to individual requests for disenrollment from MPP. In addition, the lack of a public-facing platform would reduce DHS's ability to

systematically track and monitor these requests.

A new Privacy Impact Assessment is in process titled "Migrant Protection Protocols (MPP) Case Request System." Upon submission of the full 3-year approval, the PIA will be completed. The system is covered by an existing SORN: DHS/USCIS/ICE/CBP-001 Alien File, Index, and National File Tracking System of Records; and DHS/USCIS-007 Benefits Information System.

This is a new information collection.

The Office of Management and Budget is particularly interested in comments which:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected; and

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submissions of responses.

Analysis

Agency: Department of Homeland Security (DHS).

Title: Migrant Protection Protocols (MPP) Disenrollment Request System.

OMB Number: 1601-NEW.

Frequency: Annually.

Affected Public: Public.

Number of Respondents: 5,000.

Estimated Time per Respondent: 20 Minutes.

Total Burden Hours: 1,667.

Robert Dorr,

Executive Director, Business Management Directorate.

[FR Doc. 2022-08508 Filed 4-20-22; 8:45 am]

BILLING CODE 9112-FL-P

DEPARTMENT OF HOMELAND SECURITY**[Docket Number DHS–2022–0019]****Agency Information Collection Activities: Minimum Standards for Driver's Licenses and Identification Cards Acceptable by Federal Agencies for Official Purposes, 1601–0005****AGENCY:** Department of Homeland Security (DHS).**ACTION:** 60-Day notice and request for comments.**SUMMARY:** The Department of Homeland Security, will submit the following Information Collection Request (ICR) to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995.**DATES:** Comments are encouraged and will be accepted until June 21, 2022. This process is conducted in accordance with 5 CFR 1320.1.**ADDRESSES:** You may submit comments, identified by docket number Docket # DHS–2022–0019 at:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Please follow the instructions for submitting comments.

Instructions: All submissions received must include the agency name and docket number Docket # DHS–2022–0019. All comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>.

SUPPLEMENTARY INFORMATION: The REAL ID Act of 2005 (the Act) prohibits Federal agencies from accepting State-issued drivers' licenses or identification cards for any official purpose—defined by the Act and regulations as boarding commercial aircraft, accessing federal facilities, or entering nuclear power plants—unless the license or card is issued by a State that meets the requirements set forth in the Act. Title II of Division B of Public Law 109–13, codified at 49 U.S.C. 30301 note. The REAL ID regulations, which DHS issued in January 2008, establish the minimum standards that States must meet to comply with the Act. See 73 FR 5272, also 6 CFR part 37 (Jan. 29, 2008). These include requirements for presentation and verification of documents to establish identity and lawful status, standards for document issuance and security, and physical security requirements for driver's license production facilities. For a State to

achieve full compliance, the Department of Homeland Security (DHS) must make a final determination that the State has met the requirements contained in the regulations and is compliant with the Act. The regulations include new information reporting and record keeping requirements for States seeking a full compliance determination by DHS. As discussed in more detail below, States seeking DHS's full compliance determination must certify that they are meeting certain standards in the issuance of driver's licenses and identification cards and submit security plans covering physical security of document production and storage facilities as well as security of personally identifiable information. 6 CFR 37.55(a). States also must conduct background checks and training for employees involved in the document production and issuance processes and retain and store applicant photographs and other source documents. 6 CFR 37.31 and 37.45. States must recertify compliance with REAL ID every three years on a rolling basis as determined by the Secretary of Homeland Security. 6 CFR 37.55.

Certification Process Generally

Section 202(a)(2) of the REAL ID Act requires the Secretary to determine whether a State is meeting its requirements, "based on certifications made by the State to the Secretary." To assist DHS in making a final compliance determination, 37.55 of the rule requires the submission of the following materials:

(1) A certification by the highest level Executive official in the state overseeing the DMV that the state has implemented a program for issuing driver's licenses and identification cards in compliance with the REAL ID Act.

(2) A letter from the Attorney General of the State confirming the State has the legal authority to impose requirements necessary to meet the standards.

(3) A description of a State's exceptions process to accept alternate documents to establish identity and lawful status and wavier process used when conducting background checks for individuals involved in the document production process.

(4) The State's security plan.

Additionally, after a final compliance determination by DHS, states must recertify compliance every three years on a rolling basis as determined by DHS. 6 CFR 37.55(b).

State REAL ID programs will be subject to DHS review to determine whether the state meets the requirements for compliance. States must cooperate with DHS's compliance

review and provide any reasonable information requested by DHS relevant to determining compliance. Under the rule, DHS may inspect sites associated with the enrollment of applicants and the production, manufacture, personalization, and issuance of driver's licenses or identification cards. DHS also may conduct interviews of employees and contractors involved in the document issuance, verification, and production processes. 6 CFR 37.59(a).

Following a review of a State's certification package, DHS may make a preliminary determination that the State needs to take corrective actions to achieve full compliance. In such cases, a State may have to respond to DHS and explain the actions it took or plans to take to correct any deficiencies cited in the preliminary determination or alternatively, detail why the DHS preliminary determination is incorrect. 6 CFR 37.59(b).

Security Plans

In order for States to be in compliance with the Act, they must ensure the security of production facilities and materials and conduct background checks and fraudulent document training for employees involved in document issuance and production. REAL ID Act sec. 202(d)(7)–(9). The Act also requires compliant licenses and identification cards to include features to prevent tampering, counterfeiting, or duplication. REAL ID Act sec. 202(b). To document compliance with these requirements the regulations require States to prepare a security plan and submit it as part of their certification package. 6 CFR 37.41. At a minimum, the security plan must address steps the State is taking to ensure:

- The physical security of production materials and storage and production facilities;
- security of personally identifiable information maintained at DMVs including a privacy policy and standards and procedures for document retention and destruction;
- document security features including a description of the use of biometrics and the technical standards used;
- facility access control including credentialing and background checks;
- fraudulent document and security awareness training;
- emergency response;
- internal audit controls; and
- an affirmation that the State possesses the authority and means to protect the confidentiality of REAL ID documents issued in support of criminal justice agencies or similar programs.

The security plan also must include a report on card security and integrity.

Background Checks and Waiver Process

Within its security plans, the rule requires States to outline their approach to conducting background checks of certain DMV employees involved in the card production process. 6 CFR 37.45. Specifically, States are required to perform background checks on persons who are involved in the manufacture or production of REAL ID driver's licenses and identification cards, as well as on individuals who have the ability to affect the identity information that appears on the driver's license or identification card and on current employees who will be assigned to such positions. The background check must include a name-based and fingerprint-based criminal history records check, an employment eligibility check, and for newer employees a prior employment reference check. The regulation permits a State to establish procedures to allow for a waiver for certain background check requirements in cases, for example, where the employee has been arrested, but no final disposition of the matter has been reached.

Exceptions Process

Under the rule, a State DMV may choose to establish written, defined exceptions process for persons who, for reasons beyond their control, are unable to present all necessary documents and must rely on alternate documents to establish identity, and date of birth. 6 CFR 37.11(h). Alternative documents to demonstrate lawful status will only be allowed to demonstrate U.S. citizenship. The State must retain copies or images of the alternate documents accepted under the exceptions process and submit a report with a copy of the exceptions process as part of its certification package.

Recordkeeping

The rule requires States to maintain photographs of applicants and records of certain source documents. Paper or microfiche copies of these documents must be retained for a minimum of seven years. Digital images of these documents must be retained for a minimum of ten years. 6 CFR 37.31.

Extension Requests

Pursuant to 37.63 of the Final Rule, States granted an initial extension may file a request for an additional extension. Subsequent extensions will be granted at the discretion of the Secretary.

Issuance Data

To assist in program administration and enforcement planning efforts, DHS is requesting data from the states describing (1) the total number of driver's license/identification card holders in the state, (2) the total number of REAL ID compliant licenses and identification cards issued by the state, and (3) the total number of noncompliant licenses and identification cards issued by the state.

The collection of the information will support the information needs of DHS in its efforts to determine state compliance with requirements for issuing REAL ID driver's licenses and identification cards. States may submit the required documents in any format that they choose. DHS has not defined specific format submission requirements for states. DHS will use all of the submitted documentation to evaluate State progress in implementing the requirements of the REAL ID Final Rule. DHS has used information provided under the current collection to grant extensions and track state progress. Collection of the issuance data will help DHS and other federal agencies in planning for full enforcement.

Submission of the security plan helps to ensure the integrity of the license and identification card issuance and production process and outlines the measures taken to protect personal information collected, maintained, and used by state DMVs. Additionally, the collection will assist other Federal and State agencies conducting or assisting with necessary background and immigration checks for certain employees. The purpose of the name-based and fingerprint based CHRC requirement is to ensure the suitability and trustworthiness of individuals who have the ability to affect the identity information that appears on the license; have access to the production process; or who are involved in the manufacture or issuance of the licenses and identification cards.

In compliance with GPEA, States will be permitted to electronically submit the information for their security plans, certification packages, recertifications, extensions, written exceptions processes, and issuance data. States will be permitted to submit electronic signatures but must keep the original signature on file. Additionally, because they contain sensitive security information (SSI), the security plans must be handled and protected in accordance with 49 CFR part 1520. 6 CFR 37.41(c). The final rule does not dictate how States must submit their employees' fingerprints to the FBI for

background checks; however it is assumed States will do so via electronic means or another means determined by the FBI.

The information collection discussed in this analysis applies to states, state agencies, and certain employees involved in the card production process. Therefore, it is DHS's belief that the information collection does not have a significant impact on a substantial number of small businesses.

In accordance with the regulations, submission of certification materials and security plans will assist DHS in determining full compliance. DHS may also review documents, audit processes, and conduct inspections. Failure to make a compliance determination would prevent state-issued licenses and identification cards from being used for official purposes, which includes boarding commercial aircraft and accessing federal facilities. Additional requirements for recordkeeping, document retention and storage, as well as background checks for certain employees help to ensure the integrity of the card production and issuance process and will assist DHS during audits or inspections of a state's processes. Submission of issuance data will assist DHS in evaluating individual state and the overall issuance rate of REAL IDs, which will help in enforcement planning efforts.

Information provided will be protected from disclosure to the extent appropriate under applicable provisions of the Freedom of Information Act, the Privacy Act of 1974, the Driver's Privacy Protection Act, as well as DHS's Privacy Impact Assessment for the REAL ID Act.

There has been no program changes or new requirements established as a result of this collection request.

Extensions were covered in the initial request however it was incorrectly removed from the subsequent request.

The submission of issuance data by the states was not included in the original ICR or its subsequent renewals or updates.

The Office of Management and Budget is particularly interested in comments which:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected; and

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.*, permitting electronic submissions of responses.

Analysis

Agency: Department of Homeland Security (DHS).

Title: Minimum Standards for Driver's licenses and Identification Cards Acceptable by Federal Agencies for Official Purposes.

OMB Number: 1601–0005.

Frequency: Annually.

Affected Public: State, Local, Tribal Government.

Number of Respondents: 56.

Estimated Time per Respondent: 1.

Total Burden Hours: 444,134.

Robert Dorr,

Acting Executive Director, Business Management Directorate.

[FR Doc. 2022–08510 Filed 4–20–22; 8:45 am]

BILLING CODE 9112–FK–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[L19900000.PO0000.LLWO320.20X; OMB Control No. 1004–0001]

Agency Information Collection Activities; Free Use Application and Permit for Vegetative or Mineral Materials

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Information Collection; request for comment.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, the Bureau of Land Management (BLM) proposes to renew an information collection.

DATES: Interested persons are invited to submit comments on or before June 21, 2022.

ADDRESSES: Send your written comments on this information collection request (ICR) by mail to Darrin King, Information Collection Clearance Officer, U.S. Department of the Interior, Bureau of Land Management, Attention PRA Office, 440 W 200 S #500, Salt Lake City, UT 84101; or by email to BLM_HQ_PRA_Comments@blm.gov. Please reference

Office of Management and Budget (OMB) Control Number 1004–0001 in the subject line of your comments. Please note that due to COVID–19, the electronic submission of comments is recommended.

FOR FURTHER INFORMATION CONTACT: To request additional information about this ICR, contact Elaine Guenaga by email at eguenaga@blm.gov, or by telephone at 775–276–0287. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States. You may also view the ICR at <http://www.reginfo.gov/public/do/PRAMain>.

SUPPLEMENTARY INFORMATION: In accordance with the Paperwork Reduction Act of 1995 (PRA, 44 U.S.C. 3501 *et seq.*) and 5 CFR 1320.8(d)(1), all information collections require approval under the PRA. We may not conduct or sponsor, and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

As part of our continuing effort to reduce paperwork and respondent burdens, we invite the public and other Federal agencies to comment on new, proposed, revised, and continuing collections of information. This helps us assess the impact of our information collection requirements and minimize the public's reporting burden. It also helps the public understand our information collection requirements and provide the requested data in the desired format.

We are especially interested in public comment addressing the following:

- (1) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- (2) The accuracy of our estimate of the burden for this collection of information, including the validity of the methodology and assumptions used;
- (3) Ways to enhance the quality, utility, and clarity of the information to be collected; and
- (4) How the agency might minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of

information technology, *e.g.*, permitting electronic submission of response.

Comments that you submit in response to this notice are a matter of public record. We will include or summarize each comment in our request to OMB to approve this ICR. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Abstract: The Free Use vegetative permits are available for Mining Claimants, Federal, State, Territorial agencies, municipalities and associations or corporations not organized for profit and they must certify that the materials will not be used for commercial or industrial purposes. Free Use Permits for Mineral Materials are available to any Federal, State, or territorial agency, unit, or subdivision including municipalities or any non-profit organization. OMB Control Number 1004–0001 authorizes the BLM to collect information to continue the use of separate permit forms for the free use of vegetative materials and mineral materials. There are no changes proposed for the forms. We are, however, adjusting the total estimated annual burden hours from 124 hours to 73 hours, a reduction of 51 annual burden hours. The reduction of annual burden hours results from adjusting the number of estimated annual response from 247 to 146. The number of annual responses is being adjusted to reflect the average number of applications received by the BLM over the past three years. This OMB Control Number is currently scheduled to expire on January 31, 2023. The BLM plans to request that OMB renew this OMB Control Number for an additional three years.

Title of Collection: Free Use Application and Permit for Vegetative or Mineral Materials (43 CFR parts 3600, 3620, and 5510).

OMB Control Number: 1004–0001.

Form Numbers: 3604–1 a and b, Free Use Application and Permit for Mineral Materials; and 5510–1, Free Use Application and Permit for Vegetative Materials.

Type of Review: Extension of a currently approved collection.

Respondents/Affected Public: Individuals seeking authorization for

free use of mineral or vegetative materials.

Total Estimated Number of Annual Respondents: 146.

Total Estimated Number of Annual Responses: 146.

Estimated Completion Time per Response: 30 minutes.

Total Estimated Number of Annual Burden Hours: 73.

Respondent's Obligation: Required to obtain or retain a benefit.

Frequency of Collection: On occasion.

Total Estimated Annual Nonhour Burden Cost: \$0.

An agency may not conduct or sponsor and, notwithstanding any other provision of law, a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

The authority for this action is the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Darrin A. King,

Information Collection Clearance Officer.

[FR Doc. 2022-08512 Filed 4-20-22; 8:45 am]

BILLING CODE 4310-84-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337-TA-1240]

Certain UMTS and LTE Cellular Communications Modules and Products Containing the Same; Notice of Request for Submissions on the Public Interest

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that on April 1, 2022, the presiding administrative law judge ("ALJ") issued an Initial Determination on Violation of Section 337. On April 15, 2022, the ALJ issued a Recommended Determination on Remedy and Bonding ("RD") should a violation be found in the above-captioned investigation. The Commission is soliciting submissions on public interest issues raised by the recommended relief should the Commission find a violation. This notice is soliciting comments from the public only.

FOR FURTHER INFORMATION CONTACT: Carl P. Bretscher, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205-2382. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission's electronic docket (EDIS)

at <https://edis.usitc.gov>. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its internet server at <https://www.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: Section 337 of the Tariff Act of 1930 provides that, if the Commission finds a violation, it shall exclude the articles concerned from the United States:

Unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry.

19 U.S.C. 1337(d)(1). A similar provision applies to cease and desist orders. 19 U.S.C. 1337(f)(1).

The Commission is soliciting submissions on public interest issues raised by the recommended relief should the Commission find a violation, specifically: (a) A limited exclusion order (subject to 12-month delay and certification provisions in the RD) directed to certain UMTS and LTE cellular communication modules and products containing same imported, sold for importation, and/or sold after importation by respondents Thales DIS AIS USA, LLC of Bellevue, Washington; Thales DIS AIS Deutschland GmbH of München, Germany; Thales USA, Inc. of Arlington, Virginia; Thales S.A. of Paris, France (collectively, "Thales Respondents"); Telit Wireless Solutions, Inc. of Durham, North Carolina; Telit Communications PLC of London, United Kingdom (collectively, "Telit Respondents"); Quectel Wireless Solutions Co., Ltd. of Shanghai, China ("Quectel"); CalAmp Corp. of Irvine, California ("CalAmp"); Xirgo Technologies, LLC of Camarillo, California ("Xirgo"); and/or Laird Connectivity, Inc. of Akron, Ohio ("LCI"); and (b) cease and desist orders (subject to a 12-month delay and re-export provisions in the RD) directed to the Telit, CalAmp, and LCI Respondents above but not the Thales, Quectel, or Xirgo Respondents. Parties are to file public interest submissions pursuant to 19 CFR 210.50(a)(4).

The Commission is interested in further development of the record on the public interest in this investigation. Accordingly, members of the public are invited to file submissions of no more

than five (5) pages, inclusive of attachments, concerning the public interest in light of the ALJ's Recommended Determination on Remedy and Bonding issued in this investigation on April 15, 2022. Comments should address whether issuance of the recommended remedial orders in this investigation, should the Commission find a violation, would affect the public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, or United States consumers.

In particular, the Commission is interested in comments that:

(i) Explain how the articles potentially subject to the recommended remedial orders are used in the United States;

(ii) identify any public health, safety, or welfare concerns in the United States relating to the recommended orders;

(iii) identify like or directly competitive articles that complainant, its licensees, or third parties make in the United States which could replace the subject articles if they were to be excluded;

(iv) indicate whether complainant, complainant's licensees, and/or third-party suppliers have the capacity to replace the volume of articles potentially subject to the recommended orders within a commercially reasonable time; and

(v) explain how the recommended orders would impact consumers in the United States.

Written submissions must be filed no later than by close of business on May 16, 2022.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 CFR 210.4(f) are currently waived. 85 FR 15798 (Mar. 19, 2020). Submissions should refer to the investigation number ("Inv. No. 337-TA-1240") in a prominent place on the cover page and/or the first page. (See *Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf.) Persons with questions regarding filing should contact the Secretary (202-205-2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment by marking each document with a header indicating that the document contains confidential information. This marking will be deemed to satisfy the request procedure

set forth in Rules 201.6(b) and 210.5(e)(2) (19 CFR 201.6(b) & 210.5(e)(2)). Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. Any non-party wishing to submit comments containing confidential information must serve those comments on the parties to the investigation pursuant to the applicable Administrative Protective Order. A redacted non-confidential version of the document must also be filed simultaneously with any confidential filing and must be served in accordance with Commission Rule 210.4(f)(7)(ii)(A) (19 CFR 210.4(f)(7)(ii)(A)). All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this investigation may be disclosed to and used: (i) By the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel, solely for cybersecurity purposes. All contract personnel will sign appropriate nondisclosure agreements. All nonconfidential written submissions will be available for public inspection on EDIS.

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

Issued: April 18, 2022.

Lisa Barton,

Secretary to the Commission.

[FR Doc. 2022-08518 Filed 4-20-22; 8:45 am]

BILLING CODE 7020-02-P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140-0074]

Agency Information Collection Activities; Proposed eCollection of eComments Requested; List of Responsible Persons

AGENCY: Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice.

ACTION: 30-Day notice.

SUMMARY: The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Department of Justice (DOJ) will submit the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted for an additional 30 days until May 23, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Evaluate whether and, if so, how the quality, utility, and clarity of the information to be collected can be enhanced; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.*, permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension without Change of a Currently Approved Collection.

(2) *The Title of the Form/Collection:* List of Responsible Persons.

(3) *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* Form number: None.

Component: Bureau of Alcohol, Tobacco, Firearms and Explosives, U.S. Department of Justice.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:*

Primary: Business or other for-profit.

Other: None.

Abstract: All holders of Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) explosives licensees or permits must report any change in responsible persons (RPs) and possessors of explosives to ATF, within 30 days of the change.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* An estimated 50,000 respondents will respond to this collection twice annually, and it will take each respondent approximately one hour to complete their responses.

(6) *An estimate of the total public burden (in hours) associated with the collection:* The estimated annual public burden associated with this collection is 100,000 hours, which is equal to 50,000 (total respondents) * 2 (# of response per respondents) * 1 (# of hours or the time taken to prepare each response).

If additional information is required contact: Melody Braswell, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE, Mail Stop 3.E-405A, Washington, DC 20530.

Dated: April 18, 2022.

Melody Braswell,

Department Clearance Officer for PRA, U.S. Department of Justice.

[FR Doc. 2022-08516 Filed 4-20-22; 8:45 am]

BILLING CODE 4410-FY-P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

Larry S. Everhart, M.D.; Decision and Order

On January 14, 2022, a former Acting Assistant Administrator, Diversion Control Division, Drug Enforcement Administration (hereinafter, Government), issued an Order to Show Cause (hereinafter, OSC) to Larry S. Everhart, M.D. (hereinafter, Registrant) of Powell, Ohio. Request for Final Agency Action (hereinafter, RFAA), Exhibit (hereinafter, RFAAX) A (OSC), at 1. The OSC proposed the revocation of Registrant's Certificate of Registration No. AE5735557. *Id.* It alleged that Registrant is "without authority to prescribe controlled substances in the State of Ohio, the state in which [he is] registered with the DEA." *Id.* at 2 (citing 21 U.S.C. 824(a)(3)).

Specifically, the OSC alleged that on or about July 14, 2021, the State Medical Board of Ohio permanently revoked Registrant's medical license after finding that on numerous occasions, Registrant relied on an unproven diagnostic device to diagnose and treat patients; inappropriately prescribed an anti-parasitic drug and prescribed it in excess of recommended dosages; inappropriately prescribed multiple antibiotics in excess of recommended dosages; and failed to maintain complete and/or legible medical records. *Id.*

The OSC notified Registrant of the right to request a hearing on the allegations or to submit a written statement, while waiving the right to a hearing, the procedures for electing each option, and the consequences for failing to elect either option. *Id.* at 2–3 (citing 21 CFR 1301.43). The OSC also notified Registrant of the opportunity to submit a corrective action plan. *Id.* at 3 (citing 21 U.S.C. 824(c)(2)(C)).

Adequacy of Service

In a Declaration dated March 4, 2022, a Diversion Investigator (hereinafter, the DI) assigned to the Columbus District Office of the Detroit Field Division stated that on or about January 20, 2022, she sent a copy of the OSC via certified mail to Registrant's registered address. RFAAX B (DI's Declaration), at 1–2. According to the DI, United States Postal Service (USPS) tracking information indicates that the copy of the OSC was delivered on or about January 24, 2022. *Id.* at 2.

The Government forwarded its RFAA, along with the evidentiary record, to this office on March 15, 2022. According to the Government's RFAA, "[Registrant] has not corresponded or otherwise communicated with DEA regarding the [OSC]." RFAA, at 2. Further, the Government states that, "[m]ore than 30 days have passed since [Registrant] was served with the [OSC] and, therefore, the deadline for requesting a hearing or submitting a written statement of position has passed." *Id.* (citing 21 CFR 1301.43). The Government requests that "[Registrant's] DEA Certificate of Registration as a practitioner be revoked based on his lack of authority to handle controlled substances in the State of Ohio, the state in which he is registered with DEA." *Id.* at 6.

Based on the DI's Declaration, the Government's written representations, and my review of the record, I find that the Government accomplished service of the OSC on Registrant on or before January 24, 2022. I also find that more than thirty days have now passed since

the Government accomplished service of the OSC. Further, based on the DI's Declaration, the Government's written representations, and my review of the record, I find that neither Registrant, nor anyone purporting to represent Registrant, requested a hearing, submitted a written statement while waiving Registrant's right to a hearing, or submitted a corrective action plan. Accordingly, I find that Registrant has waived the right to a hearing and the right to submit a written statement or corrective action plan. 21 CFR 1301.43(d); 21 U.S.C. 824(c)(2)(C). I, therefore, issue this Decision and Order based on the record submitted by the Government, which constitutes the entire record before me. 21 CFR 1301.43(e).

Findings of Fact

Registrant's DEA Registration

Registrant is the holder of DEA Certificate of Registration No. AE5735557 at the registered address of 3779 Attucks Drive, Powell, Ohio 43065. RFAAX B (DI's Declaration), at 1. Pursuant to this registration, Registrant is authorized to dispense controlled substances in schedules II through V as a practitioner. *Id.* Registrant's registration expires on August 31, 2022. *Id.*

The Status of Registrant's State License

On May 13, 2020, the State Medical Board of Ohio (hereinafter, the Board) notified Registrant that the Board intended to "determine whether or not to limit, revoke, permanently revoke, suspend, refuse to grant or register or renew or reinstate [his] license or certificate to practice medicine and surgery, or to reprimand [him] or place [him] on probation." RFAAX B, Exhibit B–1, at 124–125. According to the Board's letter, from on or about January 24, 2005, to July 24, 2019, Registrant relied on "an unproven electrodermal diagnostic device" to diagnose and treat ten different patients. *Id.* at 124. Regarding these diagnoses, Registrant failed to confirm the results through laboratory testing and/or consultation from a specialist before employing treatment measures. *Id.* The Board's letter also alleged that, in regard to the treatment of the ten patients, Registrant inappropriately prescribed an antiparasitic drug and multiple antibiotics, prescribing the medications in excess of recommended dosages and without appropriately confirming diagnoses. *Id.* Finally, the Board's letter alleged that Registrant's medical records for the ten patients were "incomplete and/or illegible." *Id.* The Board argued,

citing to Ohio State law, that Registrant's conduct constituted a "'departure from, or the failure to conform to, minimal standards of care.'" *Id.* The Board also argued, citing to Ohio State law, that Registrant's conduct constituted a "'[f]ailure to maintain minimal standards applicable to the selection or administration of drugs, or failure to employ acceptable scientific methods in the selection of drugs or other modalities for treatment of disease.'" *Id.* at 124–125. On July 14, 2021, the Board issued its Entry of Order permanently revoking Registrant's Ohio medical license and ordering Registrant to pay a fine of \$3,500. *Id.* at 3.

According to Ohio's online records, of which I take official notice, Registrant's medical license is still permanently revoked.¹ https://elicense.ohio.gov/oh_verifylicense (last visited date of signature of this Order). Accordingly, I find that Registrant is not currently licensed to practice medicine in Ohio, the state in which he is registered with the DEA.

Discussion

Pursuant to 21 U.S.C. 824(a)(3), the Attorney General is authorized to suspend or revoke a registration issued under section 823 of the Controlled Substances Act (hereinafter, CSA) "upon a finding that the registrant . . . has had his State license or registration suspended . . . [or] revoked . . . by competent State authority and is no longer authorized by State law to engage in the . . . dispensing of controlled substances." With respect to a practitioner, the DEA has also long held that the possession of authority to dispense controlled substances under the laws of the state in which a practitioner engages in professional practice is a fundamental condition for obtaining and maintaining a practitioner's registration. *See, e.g., James L. Hooper, M.D.*, 76 FR 71371 (2011), *pet. for rev. denied*, 481 F. App'x

¹ Under the Administrative Procedure Act, an agency "may take official notice of facts at any stage in a proceeding—even in the final decision." United States Department of Justice, Attorney General's Manual on the Administrative Procedure Act 80 (1947) (Wm. W. Gaunt & Sons, Inc., Reprint 1979). Pursuant to 5 U.S.C. 556(e), "[w]hen an agency decision rests on official notice of a material fact not appearing in the evidence in the record, a party is entitled, on timely request, to an opportunity to show the contrary." Accordingly, Registrant may dispute my finding by filing a properly supported motion for reconsideration of finding of fact within fifteen calendar days of the date of this Order. Any such motion and response shall be filed and served by email to the other party and to Office of the Administrator, Drug Enforcement Administration at dea.addo.attorneys@dea.usdoj.gov.

826 (4th Cir. 2012); *Frederick Marsh Blanton, M.D.*, 43 FR 27616, 27617 (1978).

This rule derives from the text of two provisions of the CSA. First, Congress defined the term “practitioner” to mean “a physician . . . or other person licensed, registered, or otherwise permitted, by . . . the jurisdiction in which he practices . . . , to distribute, dispense, . . . [or] administer . . . a controlled substance in the course of professional practice.” 21 U.S.C. 802(21). Second, in setting the requirements for obtaining a practitioner’s registration, Congress directed that “[t]he Attorney General shall register practitioners . . . if the applicant is authorized to dispense . . . controlled substances under the laws of the State in which he practices.” 21 U.S.C. 823(f). Because Congress has clearly mandated that a practitioner possess state authority in order to be deemed a practitioner under the CSA, the DEA has held repeatedly that revocation of a practitioner’s registration is the appropriate sanction whenever he is no longer authorized to dispense controlled substances under the laws of the state in which he practices. *See, e.g., James L. Hooper*, 76 FR at 71371–72; *Sheran Arden Yeates, M.D.*, 71 FR 39130, 39131 (2006); *Dominick A. Ricci, M.D.*, 58 FR 51104, 51105 (1993); *Bobby Watts, M.D.*, 53 FR 11919, 11920 (1988); *Frederick Marsh Blanton*, 43 FR at 27617.

According to Ohio law, “No person shall knowingly obtain, possess, or use a controlled substance or a controlled substance analog,” except pursuant to a “prescription issued by a licensed health professional authorized to prescribe drugs if the prescription was issued for a legitimate medical purpose.” Ohio Rev. Code Ann. §§ 2925.11(A), (B)(1)(d) (West, current through File 85 of the 134th General Assembly (2021–2022)). Ohio law further states that a “[l]icensed health professional authorized to prescribe drugs” or “prescriber” means “an individual who is authorized by law to prescribe drugs or dangerous drugs or drug therapy related devices in the course of the individual’s professional practice.” *Id.* at § 4729.01(I). The definition further provides a limited list of authorized prescribers, the relevant provision of which is “[a] physician authorized under Chapter 4731[] of the Revised Code to practice medicine and surgery, osteopathic medicine and surgery, or podiatric medicine and surgery.” *Id.* at § 4729.01(I)(5). Additionally, Ohio law permits “[a] licensed health professional authorized to prescribe drugs, if acting in the

course of professional practice, in accordance with the laws regulating the professional’s practice” to prescribe or administer schedule II, III, IV, and V controlled substances to patients. *Id.* at § 3719.06(A)(1)(a)–(b).

Here, the undisputed evidence in the record is that Registrant currently lacks authority to practice medicine in Ohio. As already discussed, a physician is authorized by law to prescribe or administer drugs in Ohio only when authorized to practice medicine and surgery under Ohio law. Thus, because Registrant lacks authority to practice medicine in Ohio and, therefore, is not authorized to handle controlled substances in Ohio, Registrant is not eligible to maintain a DEA registration. Accordingly, I will order that Registrant’s DEA registration be revoked.

Order

Pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 824(a), I hereby revoke DEA Certificate of Registration No. AE5735557 issued to Larry S. Everhart, M.D. Further, pursuant to 28 CFR 0.100(b) and the authority vested in me by 21 U.S.C. 823(f), I hereby deny any pending application of Larry S. Everhart, M.D. to renew or modify this registration, as well as any other pending application of Larry S. Everhart, M.D. for additional registration in Ohio. This Order is effective May 23, 2022.

Anne Milgram,

Administrator.

[FR Doc. 2022–08513 Filed 4–20–22; 8:45 am]

BILLING CODE 4410–09–P

DEPARTMENT OF JUSTICE

[OMB Number 1122–0001]

Agency Information Collection Activities; Proposed eCollection Requested; Revision of a Currently Approved Collection

AGENCY: Office on Violence Against Women, Department of Justice.

ACTION: 60-Day Notice.

SUMMARY: The Department of Justice, Office on Violence Against Women (OVW) will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995.

DATES: Comments are encouraged and will be accepted for 60 days until June 21, 2022.

FOR FURTHER INFORMATION CONTACT:

Written comments and/or suggestion regarding the items contained in this notice, especially the estimated public burden and associated response time, should be directed to Cathy Poston, Office on Violence Against Women, at 202–514–5430 or *Catherine.poston@usdoj.gov*.

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.*, permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Revision of a currently approved collection.

(2) *Title of the Form/Collection:* Certification of Compliance with the Statutory Eligibility Requirements of the Violence Against Women Act as Amended.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: 1122–0001. U.S. Department of Justice, Office on Violence Against Women.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* The affected public includes STOP formula grantees (50 states, the District of Columbia and five territories (Guam, Puerto Rico, American Samoa, Virgin Islands, Northern Mariana Islands). The STOP Violence Against Women Formula Grant Program was authorized through the Violence Against Women Act of 1994 and reauthorized and amended in 2000, 2005, 2013 and

2022. The purpose of the STOP Formula Grant Program is to promote a coordinated, multi-disciplinary approach to improving the criminal justice system's response to violence against women. It envisions a partnership among law enforcement, prosecution, courts, and victim advocacy organizations to enhance victim safety and hold offenders accountable for their crimes of violence against women. The Department of Justice's Office on Violence Against Women (OVW) administers the STOP Formula Grant Program funds which must be distributed by STOP state administrators according to statutory formula (as amended in 2000, 2005, 2013, and 2022).

OVW is submitting this revision to a currently approved collection to reflect changes made to the statutorily mandated certifications for grantees under the STOP Formula Grant Program. To be eligible for funds, applicants must certify that they are in compliance with relevant requirements under 28 CFR part 90 and 34 U.S.C. 10441 through 10451.

The Violence Against Women Act Reauthorization Act of 2022, Public Law 117–103, div. W, 136 Stat. 49, 840–962 (VAWA 2022), enacted on March 15, 2022, improves and expands legal tools and grant programs addressing domestic violence, dating violence, sexual assault, and stalking. VAWA 2022 reauthorized critical grant programs created by the original Violence Against Women Act and subsequent legislation, established new programs, and strengthened Federal laws as well as adding additional certification requirements for the STOP Formula Grant Program.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond/reply:* It is estimated that it will take the approximately 56 respondents (state administrators from the STOP Formula Grant Program) less than one hour to complete a Certification of Compliance with the Statutory Eligibility Requirements of the Violence Against Women Act, as amended.

(6) *An estimate of the total public burden (in hours) associated with the collection:* The total annual hour burden to complete the Certification is less than 56 hours.

If additional information is required contact: Melody Braswell, Deputy Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE, 3E, 405B, Washington, DC 20530.

Dated: April 18, 2022.

Melody Braswell,

Department Clearance Officer, PRA, U.S. Department of Justice.

[FR Doc. 2022–08529 Filed 4–20–22; 8:45 am]

BILLING CODE 4410–FX–P

OFFICE OF MANAGEMENT AND BUDGET

Notice of Listening Sessions and Request for Information

AGENCY: Office of Management and Budget.

ACTION: Notice of listening session(s) and request for information.

SUMMARY: The Build America, Buy America Act (“the Act”), enacted as part of the Infrastructure Investment and Jobs Act (IIJA) on November 15, 2021, provides for the application of domestic preference requirements to infrastructure projects funded by Federal financial assistance and also includes requirements to standardize and simplify application of the Buy American Act in government contracts. The Act directs the Office of Management and Budget (OMB) to issue guidance that will assist agencies as they apply the new requirements. OMB seeks input from the public concerning the Act's requirement that any infrastructure projects funded with Federal financial assistance use only construction materials “produced in the United States.” The Act also requires the Federal Acquisition Regulatory Council (FAR Council) to provide a definition for “end product manufactured in the United States.” To that end, OMB also seeks input, as a member of the FAR Council, on a definition for “end product manufactured in the United States,” for incorporation into the FAR, as required by the Act.

DATES: Written submissions must be received on or before 11:59 p.m. May 23, 2022.

ADDRESSES: Please submit any written comments electronically through the Federal eRulemaking Portal at <https://regulations.gov>. Go to <https://regulations.gov> and select “Office of Management and Budget” from the agency menu to submit or view public comments.

Please note that all public comments received are subject to the Freedom of Information Act and will be posted in their entirety, including any personal and/or business confidential information provided. Do not include any information you would not like to be made publicly available. All

statements received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. You should submit only information that you wish to make available publicly.

In addition to receiving written comments, OMB plans to hold two public listening sessions, addressing the themes specified, on the following dates:

Listening Session 1—April 25 (10:30 a.m.–12:00 p.m. EDT). This listening session will focus on non-ferrous metals and plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables).

To register for Listening Session 1, visit: <https://www.eventbrite.com/e/public-listening-session-request-for-information-on-construction-materials-tickets-321722569867>.

Listening Session 2—April 28 (2:00 p.m.–3:30 p.m. EDT). This listening session will focus on glass (including optic glass), lumber, drywall, and all other products.

To register for Listening Session 2, visit: <https://www.eventbrite.com/e/public-listening-session-request-for-information-on-construction-materials-tickets-314863694787>.

FOR FURTHER INFORMATION CONTACT: For questions about this RFI, please contact Tim Soltis, Office of Management and Budget, 202–395–7587, or via email (preferred) at Timothy.F.Soltis@omb.eop.gov. For questions about the listening sessions, please email MBX.OMB.MadeInAmerica@omb.eop.gov.

SUPPLEMENTARY INFORMATION: On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs Act, Public Law 117–58, which includes the Build America, Buy America Act (“the Act”). Public Law 117–58, § 70901–52. By strengthening requirements for the use of iron, steel, manufactured products, and construction materials produced in the United States, the Act will bolster America's industrial base, protect national security, and support high-paying jobs.

Construction Materials Acquired Under Federal Financial Assistance Programs

The Act affirms, consistent with Executive Order 14005, *Ensuring the Future Is Made in All of America by All of America's Workers* (“the Executive Order”), this Administration's priority to “use terms and conditions of Federal financial assistance awards to maximize the use of goods, products, and materials produced in, and services

offered in, the United States.” (Exec. Order No. 14005). Under the Act’s requirements, all iron, steel, manufactured products, and construction materials used in infrastructure projects funded at least partly by Federal financial assistance must be produced in the United States. In contrast to the Buy America requirement applied to the 2009 American Recovery and Reinvestment Act, the statutory authority provided by the Act is not limited to the funds appropriated or authorized in the IIJA. BABA prohibits the award of Federal financial assistance for infrastructure unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.

Waivers traditionally available under existing Buy America laws are authorized under the Act where (1) applying the Buy America requirement would be inconsistent with the public interest; (2) where the iron, steel, manufactured products or construction material is not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; and (3) where inclusion of the domestic products or construction materials will increase the cost of the overall project by more than 25 percent. In addition, Congress directs that the Act be applied in a manner consistent with U.S. trade agreement obligations related to Government procurement.

The Act empowers OMB’s Made in America Office (“MIAO”) to maximize and enforce compliance with legal authorities, including the Act itself, which establish preferences for goods made in the United States. MIAO aims to increase reliance on domestic supply chains and reduce the need for products that are not produced in the United States through a strategic process aimed at: Achieving consistency across agencies; gathering data to support decision-making to make U.S. supply chains more resilient; bringing increased transparency to waivers in order to send clear demand signals to domestic producers; and prioritizing efforts on changes that will have the greatest impact. (OMB Memorandum M–21–26, Increasing Opportunities for Domestic Sourcing and Reducing the Need for Waivers from Made in America Laws available at: <https://www.whitehouse.gov/wp-content/uploads/2020/11/M-21-06.pdf>).

The Act defines construction materials to be “produced in the United States” if “all manufacturing processes” for the materials occurred in the United States. The Act directs OMB to issue

standards that define the term “all manufacturing processes” as it applies to U.S.-produced construction materials. In doing so, OMB must:

(A) Ensure that the standards require that each manufacturing process required for the manufacture of the construction material and the inputs of the construction material occurs in the United States; and

(B) take into consideration and seek to maximize the direct and indirect jobs benefited or created in the production of the construction material.

To establish standards defining the term “all manufacturing processes” in the case of construction materials, OMB must first determine to which materials the standards will apply. The IIJA finds that “construction materials” include an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of: Non-ferrous metals, plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber, and drywall.

OMB seeks input on whether to refine this list, and requests input on specific materials or products or categories of materials or products that should be added, removed, or clarified, as well as advice on how to distinguish construction materials from manufactured products. Distinguishing construction materials from manufactured products is particularly important given the different standards the Act establishes for determining whether each is “produced in the United States.” A manufactured product is produced in the United States if “the manufactured product was manufactured in the United States; and (ii) the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.” See IIJA 70912(6)(B). A construction material is produced in the United States if “all manufacturing processes for the construction material occurred in the United States.” See IIJA 70912(6)(C).

Insufficient clarity regarding whether a particular item is a construction

material or a manufactured product may undermine the goals of the Act.

OMB also notes that under the Act, the term “construction materials” cannot include cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives. See IIJA 70917(c)(1). Further, OMB’s standards defining “all manufacturing processes” for construction material are prohibited from including cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives as inputs of the construction material. See IIJA 70917(c)(2).

End Products Acquired Through Federal Procurement

For Federal procurements, section 70921(d) of the Act requires the FAR Council to provide a definition in the FAR for “end product manufactured in the United States,” including “guidelines to ensure that manufacturing processes involved in production of the end product occur domestically.” FAR 25.003 defines end product as “articles, materials, and supplies to be acquired for public use” and further defines “domestic end product” as including an end product manufactured in the United States if the cost of its components mined, produced, or manufactured in the United States exceeds 55 percent of the cost of all components—a content level that will increase over time pursuant to recent FAR regulatory changes issued in accordance with section 8 of the Executive Order. See 87 FR 12780. However, neither the Buy American Act (BAA, 41 U.S.C. 8301–8305), which governs domestic preferences for Federal procurement of supplies, nor Executive Orders that implement the BAA, namely Executive Orders 10582, 13881, or 14005, define the term “manufacturing.” The FAR also is silent on the meaning of this term.

The Government Accountability Office (GAO) and courts have not articulated a single standard, but generally found during challenges arising under the BAA that manufacturing involves changes in physical character, and therefore actions such as testing and packaging are not part of the manufacturing process. See *What Is Manufacturing? Why Does the Definition Matter?* (Congressional Research Service, R44755).

In the context of helping determine if small businesses are manufacturers that qualify for set-asides, SBA’s regulations state that a manufacturer “performs the primary activities in transforming inorganic or organic substances, including the assembly of parts and

components, into the end item being acquired. The end item must possess characteristics which, as a result of mechanical, chemical or human action, it did not possess before the original substances, parts or components were assembled or transformed. The end item may be finished and ready for utilization or consumption, or it may be semi-finished as a raw material to be used in further manufacturing. Firms which perform only minimal operations upon the item being procured do not qualify as manufacturers of the end item. Firms that add substances, parts, or components to an existing end item to modify its performance will not be considered the end item manufacturer where those identical modifications can be performed by and are available from the manufacturer of the existing end item." See 13 CFR 121.406(b)(2).

OMB seeks feedback, on the FAR Council's behalf, to inform the definition and guidance on the meaning of manufacturing for purposes of determining if an end product is manufactured in the United States. On its own behalf, OMB seeks information from the public on the value of aligning the definition of manufacturing for the purposes of Federal procurement and Federal financial assistance.

Maximizing the Value of Public Feedback

Responses to this RFI will assist OMB in achieving the goals and objectives of the Act and the Executive Order in the most effective manner possible. Therefore, public input is a vital component of informed policy making. OMB encourages public comment on these questions and seek any other information commenters believe is relevant to OMB's efforts. The type of feedback that would be especially useful includes recommendations for specific definitions, rules, regulations, and policies that will maximize the use of goods, materials, and products produced in the United States while ensuring that infrastructure projects are efficient and effective, including by working to avoid waste, increase the competitiveness of the U.S. economy, improve job opportunities through high labor standards, advance equity and support for underserved and disadvantaged communities, and build resilient infrastructure that helps combat the climate crisis, consistent with Executive Order 14052 on Implementation of the Infrastructure Investment and Jobs Act.

Commenters should identify, with specificity, administrative burdens, program requirements, or unnecessary complexity that may impose unjustified

barriers in general, or that may have adverse effects on equity for all, including individuals who belong to underserved communities that have been denied equitable treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities, including learning disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

Commenters should provide, with as much detail as possible, an explanation why their recommendations advance the statutory and regulatory objectives of the Act. Additionally, where applicable, please provide citations and sources that support your recommendations.

If commenters identify benefits, costs, burdens, loopholes, or shortcomings of particular options for implementing the Act, OMB requests that commenters provide data and evidence to support these conclusions.

Specific Questions

(1) Which materials, products, or categories of materials or products should be included as "construction materials" for the purposes of the Act?

(2) What should "all manufacturing processes" mean under Section 70912(6)(c) of the Act?

(a) Should the term "all manufacturing processes" have the same meaning across all construction materials, or should the standard be set differently for each product, material, or category of product or material?

(b) For example, the equivalent standard for iron and steel products is "all manufacturing processes, from the initial melting stage through the application of coatings," which does not require the iron ore to be mined in the United States, and begins the manufacturing process with "initial melting." What should be the equivalent first process for "construction materials," and should the description be different for lumber, glass, and other construction materials?

(c) If relevant to any construction materials, should "final assembly" be considered a manufacturing process? Or should a manufacturing process be limited to processes that alter the properties of a material in some way? If limited to processes that alter the properties of a material, should any particular standard apply? Should the

standard be different for lumber, glass, and other construction materials?

(3) How should agencies distinguish "construction materials" from "manufactured products" to provide clarity on how to comply with the Act's requirements and ensure efficient and effective administration?

(4) How should OMB take into consideration and seek to maximize the direct and indirect jobs benefited or created in the production of construction materials, as required by the Act?

(5) What is the current and projected capacity of United States manufacturers to supply construction materials that meet the Act's standards? How will this capacity be impacted by the standard provided for "all manufacturing processes" under the Act? Please answer this question for any of the following materials that you have responsive information on: non-ferrous metals, plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber, and drywall. Please also answer this question for any other material, product, or category of product you identified under question (1) above.

(6) Do you anticipate that United States manufacturers will be able to supply construction materials that meet the Act's standards in sufficient and reasonably available quantities and of a satisfactory quality to all infrastructure projects covered by the Act? Will this ability be impacted by the increased demand for United States manufacturing? Do you foresee supply shortages or other issues for any material? If so, what Federal policies exist that may help alleviate the challenges you identified? Please answer this question for all materials referenced in question (5) above.

(7) How can the Act's waiver transparency requirements and supplier scouting programs be leveraged to identify gaps in domestic sourcing and inform capital investment planning?

(8) How else might OMB spur and incentivize domestic manufacturing of construction materials that meet the Act's standards?

(9) What additional considerations should OMB consider when developing guidance and standards for construction materials?

(10) What guidelines should be considered by OMB and the FAR Council to determine whether an end product that might be procured under the BAA by a Federal agency has been manufactured domestically?

(a) What is the best way to promote a clear and consistent understanding of the term “manufacturing” while accommodating the range of manufacturing processes involved in the wide variety of products purchased by the Federal Government?

(b) Should consideration be given to the definition of “manufacturer” used in SBA’s regulations, as described above?

(c) Should consideration be given to holdings cited by courts or the GAO for determining whether an end product is domestically manufactured, such as whether substantial changes in physical character occurred domestically, whether the article is completed in the form required by the Government domestically, or whether the item being procured is made suitable for its intended use, and its identity is established, in the United States?

(d) What existing sources, in addition to those described above, may offer relevant definitions or guidelines that could be suitable for understanding whether an end item has been domestically manufactured in the context of Federal procurement?

Celeste Drake,

Director, Made in America Office.

[FR Doc. 2022–08491 Filed 4–20–22; 8:45 am]

BILLING CODE 3110–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2021–0179]

Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory guide; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment a draft regulatory guide (DG), DG–1389, “Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors.” This DG is proposed Revision 1 to Regulatory Guide (RG) 1.183 which describes a method that the NRC staff considers acceptable in complying with regulations for design basis accident dose consequence analysis using an Alternative Source Term. This guidance for light-water reactor (LWR) designs includes the scope, and documentation of associated analyses and evaluations; consideration of impacts on analyzed risk; and content of submittals.

DATES: Submit comments by June 21, 2022. Comments received after this date

will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the Federal rulemaking website:

- *Federal rulemaking website:* Go to <https://www.regulations.gov> and search for Docket ID NRC–2021–0179. Address questions about Docket IDs in *Regulations.gov* to Stacy Schumann; telephone: 301–415–0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- *Mail comments to:* Office of Administration, Mail Stop: TWFN–7–A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT:

Michael Eudy, Office of Nuclear Regulatory Research, telephone: 301–415–3104, email: Michael.Eudy@nrc.gov; and Mark Blumberg, Office of Nuclear Reactor Regulation, telephone: 301–415–1083, email: Mark.Blumberg@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2021–0179 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- *Federal Rulemaking Website:* Go to <https://www.regulations.gov> and search for Docket ID NRC–2021–0179.

- *NRC’s Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to PDR.Resource@nrc.gov. The ADAMS

accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- *NRC’s PDR:* You may examine and purchase copies of public documents, by appointment, at the NRC’s PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1–800–397–4209 or 301–415–4737, between 8:00 a.m. and 4:00 p.m. (ET), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the Federal rulemaking website (<https://www.regulations.gov>). Please include Docket ID NRC–2021–0179 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS.

The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Additional Information

The NRC is issuing for public comment a DG in the NRC’s “Regulatory Guide” series. This series was developed to describe methods that are acceptable to the NRC staff for implementing specific parts of the agency’s regulations, to explain techniques that the staff uses in evaluating specific issues or postulated events, and to describe information that the staff needs in its review of applications for permits and licenses.

The DG, entitled “Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors,” (ADAMS Accession No. ML21204A065) is temporarily identified by its task number, DG–1389 which is proposed

Revision 1 of RG 1.183 of the same name. This revision of the guide (Revision 1) addresses new issues identified since the guide was originally issued. These include (1) using the term maximum hypothetical accident (MHA) loss-of-coolant accident (LOCA) to define the accident described in regulation, (2) adding transient release fractions from empirical data from in-pile, prompt power pulse test programs and analyses from several international publications of fuel rod performance under prompt power excursion conditions, (3) revising steady-state release fractions for accidents other than the LOCA based on a revision to the American National Standards Institute/American Nuclear Society Standard 5.4, "Method for Calculating the Fractional Release of Volatile Fission Products from Oxide Fuel," (4) adding information to acknowledge the proposed Revision 1 may provide useful information for satisfying the radiological dose analysis requirements in part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities" and 10 CFR part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," for advanced LWR design and siting, (5) providing additional guidance for modeling boiling-water reactor (BWR) main steam isolation valve (MSIV) leakage, (6) adding guidance for accident tolerant fuel, high-burnup fuel, and increased enrichment source term analyses, (7) revising transport and decontamination models for the fuel handling design basis accident, (8) adding guidance for crediting holdup and retention of MSIV leakage within the main steam lines and condenser for BWRs, and (9) providing additional meteorological assumption guidance.

On October 14, 2009, the NRC staff issued DG-1199, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," (ADAMS Accession No. ML090960464), for public comment (74 FR 52822). DG-1199 was a proposed Revision 1 to RG 1.183. The NRC staff has elected not to finalize DG-1199 and is issuing DG-1389 as a replacement. The staff notes that DG-1389 addresses technical issues and considered public comments related to the issuance of DG-1199.

The staff is also issuing for public comment a draft regulatory analysis (ADAMS Accession No. ML21204A066). The staff developed a regulatory analysis to assess the value of issuing or revising a regulatory guide as well as alternative courses of action.

III. Backfitting, Forward Fitting, and Issue Finality

The NRC staff may use this RG, if finalized, as a reference in its regulatory processes, such as licensing, inspection, or enforcement. However, the NRC staff does not intend to use the guidance in this RG to support NRC staff actions in a manner that would constitute backfitting as that term is defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests" (ADAMS Accession No. ML18093B087), nor does the NRC staff intend to use the guidance to affect the issue finality of an approval under 10 CFR part 52. The staff also does not intend to use the guidance to support NRC staff actions in a manner that constitutes forward fitting as that term is defined and described in MD 8.4. If a licensee believes that the NRC is using this RG in a manner inconsistent with the discussion in this Implementation section, then the licensee may file a backfitting or forward fitting appeal with the NRC in accordance with the process in MD 8.4.

IV. Specific Request for Comment

In addition to the general request for comments on DG-1389, the NRC is also seeking specific comments on a draft staff technical assessment titled, "Technical Assessment of Hold-up and Retention of Main Steam Isolation Valve Leakage within the Main Steam Lines and Main Condenser" (ADAMS Accession No. ML20085J042) that is referenced in the draft revised guidance. The technical assessment provides the proposed technical basis for the low risk of gross failure of the alternate pathway to the condenser at seismic accelerations at or below a plant's design basis safe shutdown earthquake, as described in DG-1389. The technical assessment also supports a proposed streamlined approach in DG-1389 for demonstrating the seismic capacity of structures, systems, and components in the alternate pathway, compared to the approach in RG 1.183, Revision 0 (ADAMS Accession No. ML003716792).

V. Submitting Suggestions for Improvement of Regulatory Guides

A member of the public may, at any time, submit suggestions to the NRC for improvement of existing RGs or for the development of new RGs. Suggestions can be submitted on the NRC's public website at <https://www.nrc.gov/reading-rm/doc-collections/reg-guides/contactus.html>. Suggestions will be considered in future updates and

enhancements to the "Regulatory Guide" series.

Dated: April 18, 2022.

For the Nuclear Regulatory Commission.

Meraj Rahimi,

Chief, Regulatory Guide and Programs Management Branch, Division of Engineering, Office of Nuclear Regulatory Research.

[FR Doc. 2022-08519 Filed 4-20-22; 8:45 am]

BILLING CODE 7590-01-P

RAILROAD RETIREMENT BOARD

Actuarial Advisory Committee With Respect to the Railroad Retirement Account; Notice of Public Meeting

Notice is hereby given in accordance with Public Law 92-463 that the Actuarial Advisory Committee will hold a virtual meeting on May 13, 2022, at 1:00 p.m. (Central Daylight Time) on the conduct of the 2022 Annual Report Required by the Railroad Retirement Act of 1974 and the Railroad Retirement Solvency Act of 1983. The agenda for this meeting will include a discussion of the assumptions to be used in the Annual Report. A report containing recommended assumptions and the experience on which the recommendations are based will have been sent by the Chief Actuary to the Committee before the meeting.

The meeting will be open to the public. Persons wishing to submit written statements, make oral presentations, or attend the meeting should address their communications or notices to Patricia Pruitt (Patricia.Pruitt@rrb.gov) so that information on how to join the virtual meeting can be provided.

Dated: April 18, 2022.

Stephanie Hillyard,

Secretary to the Board.

[FR Doc. 2022-08542 Filed 4-20-22; 8:45 am]

BILLING CODE 7905-01-P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34 94729; File No. SR-BOX-2022-08]

Self-Regulatory Organizations; BOX Exchange LLC; Notice of Filing of Proposed Rule Change To Amend Rule 12140 (Imposition of Fines for Minor Rule Violations), To Expand the List of Violations Eligible for Disposition Under the Exchange's Minor Rule Violation Plan and Update the Fine Schedule Applicable to Certain Minor Rule Violations

April 15, 2022.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),¹ and Rule 19b-4 thereunder,² notice is hereby given that on March 31, 2022, BOX Exchange LLC (the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend Rule 12140 (Imposition of Fines for Minor Rule Violations), to expand the list of violations eligible for disposition under the Exchange's Minor Rule Violation Plan ("MRVP") and update the fine schedule applicable to minor rule violations related to certain rule violations. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's internet website at <http://boxoptions.com>.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change**1. Purpose**

The purpose of the proposed rule change is to amend Rule 12140 (Imposition of Fines for Minor Rule Violations), which governs the Exchange's MRVP, in connection with certain minor rule violations, applicable fines, as well as other clarifying and nonsubstantive changes to improve the consistency of the Exchange's MRVP with the MRVPs at other options exchanges. Specifically, the proposed rule change amends Rule 12140(d) and (e) by: (1) Adding certain rule violations that the Exchange believes to be minor in nature and consistent with violations at other options exchange; (2) updating the fine schedule applicable to minor rule violations related to certain rule violations; and (3) making other clarifying and nonsubstantive changes.

The MRVP provides that in lieu of commencing a disciplinary proceeding, the Exchange may, subject to the certain requirements set forth in the Rule, impose a fine, not to exceed \$5,000, on any Options Participant, or person associated with or employed by an Options Participant, with respect to any Rule violation listed in Rule 12140(d) or (e) discussed below. Any fine imposed pursuant to this Rule that (i) does not exceed \$2,500 and (ii) is not contested, shall be reported on a periodic basis, except as may otherwise be required by Rule 19d-1 under the Act or by any other regulatory authority. Further, the Rule provides that any person against whom a fine is imposed under the Rule shall be served with a written statement setting forth: (i) The Rule(s) allegedly violated; (ii) the act or omission constituting each such violation; (iii) the fine imposed for each violation; and (iv) the date by which such determination becomes final and such fine must be paid or contested, which date shall be not less than twenty-five (25) calendar days after the date of service of such written statement. Rule 12140(d) and (e) set forth the list of specific Exchange Rules under which an Options Participant or person associated with or employed by an Options Participant may be subject to a fine for violations of such Rules and the applicable fines that may be imposed by the Exchange. As with all the violations incorporated into its MRVP, the Exchange will proceed under this Rule only for violations that are minor in nature. Any other violation will be addressed pursuant to Rules 12030 (Letters of Consent) or 12040 (Charges).

Exercise Limits

First, the Exchange proposes to amend 12140(d)(1), Position Limits to include violations of Exercise limits pursuant to Rule 3140.³ The Exchange believes that amending Rule 12140(d)(1), Position Limits, to include violations of Exercise Limits pursuant to BOX Rule 3140 is appropriate because it will allow the Exchange to carry out its regulatory responsibility more efficiently and in a manner that is consistent with the way it handles violations of position limits. Violations of position and exercise limits on the Exchange generally occur together, so adding exercise limits to the existing position limits MRV will allow the Exchange to address these related violations more effectively. The Exchange proposes that the fine levels for exercise limit violations match the fine levels for position limits. Under this rule, any Participant who violates Rule 3120 or Rule 3140 regarding position or exercise limits shall be subject to the fines listed below. The Exchange notes that this proposal is consistent with the MRVPs in place at Cboe Exchange, Inc. ("Cboe Options"), NYSE American, LLC ("NYSE American") and NYSE Arca, Inc. ("NYSE Arca").⁴

Number of cumulative violations within any rolling twenty-four month period	Sanction
First Offense	\$500
Second Offense	1,000
Third Offense	2,500
Fourth and Each Subsequent Offense	5,000

Requests for Trade Data

As stated above, the Exchange is proposing to make clarifying and non-substantive changes. As such, the Exchange is proposing to update the language to use "offense" instead of "occurrence" and "rolling" instead of "running" within the fine schedule to provide greater consistency in the terminology used within the Exchange's MRVP and with the MRVPs of the other options exchanges. There is no substantive difference in the Exchange's interpretation between "offense" and "occurrence" and "running" and "rolling." The Exchange is also

³ The Exchange notes that BOX Rule 3140 establishes a limit on the number of option contracts of a single class that an Options Participant can exercise within any five consecutive business days. Exercise limits are fixed by the Exchange pursuant to Rule 3140 and vary by class of options. See BOX Rule 3140.

⁴ See Cboe Options Rule 13.15(g)(1). See also NYSE American Rule 9217(iii)(17). See also NYSE Arca Rule 10.12(k)(i)(21).

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

proposing to clarify the distinction between offense and violation by updating the terminology to only use the term offense when the listed fines are meant to cover multiple violations. The purpose of these changes is to provide greater clarity within the Exchange's MRVP by using more consistent terminology throughout. As such, the Exchange is proposing to amend Rule 12140(d)(3) Requests for Trade Data pursuant to Rule 10040, to change occurrence to violation within the fine schedule. The Exchange believes this proposed clarifying and non-substantive change is appropriate because it will help clarify this distinction between offense and violation by updating the terminology to only use the term offense when the listed fines are meant to cover multiple violations. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges. The Exchange is not proposing to amend the sanctions under this Rule 12140(d)(3). The Exchange proposes to update the fine schedule as follows:

Number of violations within one calendar year	Sanction
2nd Violation	\$500.
3rd Violation	\$1,000.
4th Violation	\$2,500.
Subsequent Violations.	Formal Disciplinary Action.

Quotation Parameters

The Exchange is also proposing to amend Rule 12140(d)(5) Quotation Parameters to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these sanctions will allow the Exchange to provide more appropriate punishments and more effectively deter violations of this nature. The Exchange believes that removing the lesser penalty (letter of caution) for the first,

second, and third offenses in order to provide fines for the first, second, and third offenses and, ultimately, formal disciplinary proceedings for any subsequent offenses during one calendar year is appropriate. The Exchange believes this fine structure may serve to deter repeat-offenders more effectively. The Exchange notes this proposed change will bring the sanctions for violations regarding spread parameters or market maker quotations in line with the sanctions imposed by NYSE Arca.⁵

Rule 12140(d)(5) currently permits the Exchange to issue a letter of caution for the first, second, and third occurrence within a one calendar year running basis. For the fourth, fifth, sixth occurrences during a one-year running period, the fine schedule currently permits the Exchange to issue a fine of \$250, \$500, and \$1,000, respectively. The fine schedule also provides that for the seventh occurrence and thereafter, during a one-year running period, the sanction is discretionary with the Hearing Committee. The proposed rule change updates the fine schedule to provide that, on a one-year rolling basis, the Exchange may apply a fine of \$1,000 for a first offense, may apply a fine of \$2,500 for a second offense, may apply a fine of \$3,500 for a third offense, and may proceed with formal disciplinary action for a fourth offense and thereafter.

As described above, the Exchange is proposing to update the language to use "offense" instead of "occurrence" and "rolling" instead of "running" within the fine schedule, as there is no substantive difference in the Exchange's interpretation between "offense" and "occurrence" and "running" and "rolling." The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges. Under this proposed amendment, any Participant who violates Rule 8040(a)(7) regarding spread parameters or market maker quotations shall be subject to the fines listed below.

⁵ See NYSE Arca Rule 10.12(k)(i)(41).

Fine schedule (implemented on a one-year rolling basis)	Sanction
1st Offense	\$1,000.
2nd Offense	\$2,500.
3rd Offense	\$3,500.
4th Offense and Thereafter.	Formal Disciplinary Action.

Lead Market Maker Continuous Quoting

Next the Exchange proposes to amend Rule 12140(d)(6), Continuous Quotes to include continuous quoting violations by Lead Market Makers pursuant to BOX Rule 8050(e) and Rule 8055(c)(1). The Exchange believes that amending Rule 12140(d)(6), Continuous Quotes to include continuous quoting violations by Lead Market Makers pursuant to BOX Rule 8055(c)(1) is appropriate because it will allow the Exchange to carry out its regulatory responsibility quickly and efficiently in a manner that is consistent with the way it handles continuous quoting violations for all types of Market Makers.⁶

The Exchange is also proposing to increase and strengthen the sanctions imposed under this section, which the Exchange believes will more effectively deter violative conduct. The Exchange notes that this proposed change will bring the sanctions for violations of continuous quoting obligations in line with the sanctions imposed by Cboe Options.⁷ Rule 12140(d)(6) currently permits the Exchange to give a letter of caution for the first violation within one calendar year. For subsequent offenses during the same period, the fine schedule permits the Exchange to issue a fine of \$300 per day. The Exchange proposes to update the fine schedule as follows:

Violations within one calendar year	Sanction
1st Violation	Letter of Caution.
2nd Violation	\$1,500.
3rd Violation	\$3,000.
Subsequent Violations.	Formal Disciplinary Action.

The proposed rule change updates the fine schedule to provide that, during one calendar year, the Exchange may

⁶ The Exchange adopted Rule 7135 (Execution and Pro Rata Priority) to establish and govern pro rate execution on BOX and Rule 8055 (Lead Market Makers) which details the designation and obligations of Lead Market Makers on BOX. Rule 7350(c)(2) details Lead Market Maker Priority and Lead Market Makers may be assigned by the Exchange in each options class in accordance with Rule 8055. The Exchange now proposes to include Lead Market Maker Continuous Quoting in its MRVP. See Securities Exchange Act Release No. 91897 (May 14, 2021), 86 FR 27490 (May 20, 2021) (SR-BOX-2021-11).

⁷ See Cboe Options Rule 13.15(g)(9).

give a letter of caution for a first violation, may apply a fine of \$1,500 for a second violation, may apply a fine of \$3,000 for a third violation, and may proceed with formal disciplinary action for subsequent offenses.⁸ As described above, and as is the case for all rule violations covered under Rule 12140(d) and (e), the Exchange may determine that a violation of Market-Maker quoting obligations is intentional, egregious, or otherwise not minor in nature and choose to proceed under the Exchange's formal disciplinary rules rather than its MRVP. The Exchange believes that maintaining the lesser penalty (letter of caution) for a first offense and then providing higher fines for second and third offenses and, ultimately, formal disciplinary proceedings for any subsequent offenses during one calendar year is appropriate. This will allow the Exchange to levy progressively larger fines and greater penalties against repeat-offenders (as opposed to a smaller fine range for any offenses that may come after a first offense). The Exchange believes this fine structure may serve to deter repeat-offenders while providing reasonable warning for a first offense within one calendar year.

Under this proposed amendment, any Participant who violates Rule 8050(e) or Rule 8055(c)(1) regarding Market Maker or Lead Market Maker continuous quotes shall be subject to the fines listed above. Violations of Rule 8050(e) or Rule 8055(c)(1) that continue over consecutive trading days will be subject to a separate fine, pursuant to this paragraph (6), for each day during which the violation occurs and is continuing up to a limit of fifteen consecutive trading days. In calculating fine thresholds for each Market Maker or Lead Market Maker, all violations occurring within the Surveillance Review Period as defined within the Exchange Surveillance Procedures in any of that Market Maker or Lead Market Maker's appointed classes are to be added together. The Exchange notes that Cboe Options, and NYSE Arca have similar rule provisions in their MRVPs addressing Market Maker and Lead Market Maker continuous quoting obligations.⁹

Mandatory Systems Testing

The Exchange is also proposing to make clarifying and non-substantive changes to amend the language within the fine schedules to use the terms "and

Thereafter" and "Subsequent" instead of "or more" when detailing the number of violations. There is no substantive difference in the Exchange's interpretation between "or more" and "subsequent" or "and thereafter". The purpose of the change is to provide greater clarity within the Exchange's own MRVP by using more consistent terminology. The Exchange proposes to amend 12140(d)(7), Mandatory Systems Testing pursuant to BOX Rule 3180, to change "or more" to "and thereafter" within the fine schedule. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges. Under this rule, any Participant who violates Rule 3180 regarding the failure to conduct or participate in the testing of computer systems, or failure to provide required reports or maintain required documentation, shall be subject to the fines listed below.

Violations within one calendar year	Sanction
First Violation	\$250.
Second Violation	\$500.
Third Violation	\$1000.
Fourth Violation	\$2000.
Fifth Violation and Thereafter.	Formal Disciplinary Action.

Maintenance, Retention and Furnishing of Books, Records and Other Information

Next, the Exchange proposes to adopt 12140(d)(10), Maintenance, Retention and Furnishing of Books, Records and Other Information pursuant to BOX Rule 10000. Under this rule, any Participant who violates Rule 10000 regarding the failure to make, keep current, and preserve such books and records as required, or failure to furnish such books and records in a timely manner upon request by the Exchange shall be subject to the fines listed below.

Number of violations within any twenty-four month rolling period	Sanction
Initial Violation	\$500.
Second Violation	\$1,000.

Number of violations within any twenty-four month rolling period	Sanction
Third Violation	\$2,500.
Fourth Violation and Thereafter.	\$5,000 or Formal Disciplinary Action.

The Exchange believes the adoption of Rule 12140(d)(10) into the MRVP is appropriate because it will allow the Exchange to carry out its regulatory responsibility more efficiently and help deter BOX Participants from failing to make, keep current, and preserve such books and records as required, or failure to furnish such books and records in a timely manner upon request by the Exchange. The Exchange notes that adding this provision will help ensure consistency within the MRVP's of the various options exchanges. NYSE American and NYSE Arca have rule provisions within their respective minor rule violation plans that addresses similar recordkeeping violations.¹⁰ Further, the proposed fine schedule for these types of violations is similar to the recordkeeping sanctions imposed by NYSE American and NYSE Arca.¹¹

Anti-Money Laundering Compliance Program

The Exchange also proposes to adopt 12140(d)(11), Anti-Money Laundering Compliance Program pursuant to BOX Rule 10070. Under this Rule any Participant who violates Rule 10070 regarding the failure to satisfy the anti-money laundering compliance program requirements shall be subject to the fines listed below. The Exchange believes the adoption of Rule 12140(d)(11), is appropriate because it will help deter BOX Participants from failing to satisfy the requirements of the anti-money laundering compliance program. The Exchange believes that adding this rule to the MRVP will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently with respect to violations of BOX Rule 10070. The Exchange notes that this proposed addition is consistent

¹⁰ NYSE American and NYSE Arca have subsections within their MRVPs listing numerous specific recordkeeping violations. NYSE American Rule 9217 and NYSE Arca Rule 10.12 contain minor rule violations regarding failures to comply with the books and records requirements of Rule 324 and failures to furnish in a timely manner books, records or other requested information or testimony in connection with an examination of financial responsibility and/or operational conditions. See NYSE American Rule 9217(ii). See also NYSE Arca Rule 10.12(k)(iii).

¹¹ The NYSE American and NYSE Arca MRVPs contain numerous recordkeeping minor rule violations with fines ranging from \$500 to \$5,000 depending on the specific violation and the fine level. See NYSE American Rule 9217 (ii). See also NYSE Arca Rule 10.12(k)(iii).

⁸ The Exchange notes that CBOE Options has identical sanctions in place. See Cboe Options Rule 13.15(g)(9).

⁹ See Cboe Options Rule 13.15(g)(9). See also NYSE American Rule 9217(iii)(17). See also NYSE Arca Rule 10.12(k)(i)(39).

with the minor rule violations relating to anti-money laundering program failure with the MRVPs at NYSE American and NYSE Arca.¹² Additionally, Cboe Options has a rule provision in its MRVP that addresses violations related to anti-money laundering implementation relating to the failure to designate a person responsible for implementing and monitoring the anti-money laundering compliance program.¹³ The proposed fine schedule provides that, within any twenty-four-month rolling period, the Exchange may apply a fine of \$1,000 for a first violation and \$2,500 for subsequent violations. The Exchange believes that the proposed sanctions are appropriate, as they will provide sufficient warning to first time offenders, while deterring repeat offenders. These sanctions are identical to the sanctions applied by Cboe Options and similar to the sanctions applied by NYSE American and NYSE Arca for minor rule violations relating to anti-money laundering compliance program violations.¹⁴

Number of violations within any twenty-four month rolling period	Sanction
Initial Violation	\$1,000
Subsequent Violations	2,500

Locked and Crossed Market Violations

The Exchange is proposing to amend current Rule 12140(d)(10)¹⁵ Locked and Crossed Market Violations to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions for violations relating to locked and crossed markets is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these sanctions will allow the Exchange to provide more appropriate punishments and more effectively deter violations of this nature. The Exchange notes this proposed change will bring the sanctions for violations regarding spread parameters or market maker

¹² See NYSE American Rule 9217(ii)(12). See also NYSE Arca Rule 10.12(k)(iii)(12).
¹³ See Cboe Options Rule 13.15(g)(13).
¹⁴ Cboe Options applies sanctions of \$1000 for a first offense and \$2500 for subsequent offenses, while NYSE American and NYSE Arca have sanctions of \$2,000 for 1st level, \$4,000 for 2nd level, and \$5,000 for third level. See Cboe Options Rule 13.15(g)(13). See also NYSE American Rule 9217(ii)(12). See also NYSE Arca Rule 10.12(k)(iii)(12).

¹⁵ As discussed below, this proposed rule change subsequently renumbers Rule 12140 (d)(10) to (d)(12) as a result of the proposed addition of Rules 12140(d)(10), and (d)(11).

quotations more in line with the sanctions imposed by Cboe Options.¹⁶ Rule 12140(d)(10) currently permits the Exchange to issue a letter of caution for an initial violation within a twelve-month rolling period. The current fine schedule also permits the Exchange to apply a fine of \$250 for a second violation, \$500 for a third violation, and formal disciplinary action for the fourth or more violations within a twelve-month rolling period. The proposed rule change updates the fine schedule to provide that, within any twelve-month rolling period, the Exchange may apply a fine of \$500 for an initial violation, may apply a fine of \$2,500 for a second violation, and may apply a fine of \$5,000 or proceed with formal disciplinary action for subsequent violations. Under this proposed amendment, any Participant who violates Rule 15020 regarding procedures to be followed in the instance of a Locked or Crossed Market shall be subject to the fines listed below.

Number of violations within any twelve-month rolling period	Sanction
Initial Violation	\$500.
Second Violation	\$2,500.
Subsequent Violations.	\$5,000 or Formal Disciplinary Action.

Market Maker Assigned Activity Violations

As stated above, the Exchange is proposing to make clarifying and non-substantive changes to amend the language within the fine schedules to use the terms “and Thereafter” and “Subsequent” instead of “or more” when detailing the number of violations. There is no substantive difference in the Exchange’s interpretation between “or more” and “subsequent” or “and thereafter”. The purpose of the change is to provide greater clarity within the Exchange’s MRVP by using more consistent terminology. The Exchange proposes to amend current Rule 12140(d)(11),¹⁷ Market Maker Assigned Activity Violations pursuant to BOX Rule 8030(e), to change “or more” to “and thereafter” within the fine schedule. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they

¹⁶ Cboe Option’s MRVP provides for sanctions of \$500–1,000 for a first offense, \$1,000–2,500 for a second offense, and \$2,500–5,000 and a Staff Interview for subsequent offenses. See Cboe Options Rule 13.15(g)(8).
¹⁷ As discussed below, this proposed rule change subsequently renumbers Rule 12140 (d)(11) to (d)(13) as a result of the proposed addition of Rules 12140(d)(10), and (d)(11).

will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange’s MRVP itself and with the MRVPs of the other options exchanges. Under this rule, any Participant who violates Rule 8030(e) regarding the failure of Market Makers to limit their execution in options classes outside of their appointed classes to twenty-five percent (25%) of the total number of contracts executed during a quarter by such Market Maker, is subject to the fines listed below.

Number of violations within any twelve-month rolling period	Sanction
Initial Violation	Letter of Caution.
Second Violation	\$500.
Third Violation	\$1,000.
Fourth Violation	\$2,500.
Fifth Violation and Thereafter.	Formal Disciplinary Action.

Request for Quote Violations

As detailed above, the Exchange is proposing to make clarifying and non-substantive changes to amend the language within the fine schedules to use the terms “and Thereafter” and “Subsequent” instead of “or more” when detailing the number of violations. There is no substantive difference in the Exchange’s interpretation between “or more” and “subsequent” or “and thereafter”. The purpose of the change is to provide greater clarity within the Exchange’s MRVP by using more consistent terminology. The Exchange proposes to amend current Rule 12140(d)(12),¹⁸ Request for Quote Violations pursuant to BOX Rule 8050(c)(2)–(c)(4), to change “or more” to “and thereafter” within the fine schedule. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the

¹⁸ As discussed below, this proposed rule change subsequently renumbers Rule 12140 (d)(12) to (d)(14) as a result of the proposed addition of Rules 12140(d)(10), and (d)(11).

MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges. Under this rule, any Participant who violates Rule 8050(c)(2)–(c)(4) regarding the failure of a Market Maker to respond to a Request for Quote ("RFQ") on BOX, is subject to the fines listed below.

Number of violations within any twelve-month rolling period	Sanction
Initial Violation	Letter of Caution.
Second Violation	\$250.
Third Violation	\$500.
Fourth Violation and Thereafter.	Formal Disciplinary Action.

Trade Through Violations

As stated above, the Exchange is proposing to make clarifying and non-substantive changes to amend the language within the fine schedules to use the terms "and Thereafter" and "Subsequent" instead of "or more" when detailing the number of violations. There is no substantive difference in the Exchange's interpretation between "or more" and "subsequent" or "and thereafter". The purpose of the change is to provide greater clarity within the Exchange's MRVP by using more consistent terminology. The Exchange proposes to amend current Rule 12140(d)(13),¹⁹ Trade Through Violations pursuant to BOX Rule 15010, to change "or more" to "and thereafter" within the fine schedule. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges. Under this rule, any Participant who violates Rule 15010(a) regarding trade throughs is subject to the fines listed below.

¹⁹ As discussed below, this proposed rule change subsequently rennumbers Rule 12140 (d)(13) to (d)(15) as a result of the proposed addition of Rules 12140(d)(10), and (d)(11).

Number of violations within any twenty-four month rolling period	Sanction
Initial Violation	\$500.
Second Violation	\$1,000.
Third Violation	\$2,500.
Fourth Violation and Thereafter.	\$5,000 or Formal Disciplinary Action.

Trading Floor Violations Fine Schedules

The Exchange is proposing to update the fine schedules applicable to minor rule violations related to certain Trading Floor violations listed in Rule 12140(e) to increase and strengthen the sanctions. The Exchange adopted the minor rule violations and corresponding fines under Rule 12140(e) in 2017 following the establishment of the BOX Trading Floor.²⁰ In adopting its current trading floor minor rule violations, the Exchange believed it appropriate to adopt a lower fine amount than in place at NYSE Arca as the new trading floor was established and to be more consistent with the other fines within the Exchange's own MRVP. However, the Exchange's Trading Floor is now well-established, with a greater number of Participants, and the Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring the sanctions more in line with the fine schedules in place at NYSE Arca.²¹

The Exchange is also proposing to update the language within each minor rule violation listed within Rule 12140(e) to use the term "violation" instead of "occurrence" when detailing the number of violations within the fine schedules to provide consistency in the terminology used within the Exchange's MRVP. Within the MRVP, the Exchange interprets violation to mean one instance, while multiple violations may be deemed to constitute one offense. The Exchange believes that changing occurrence to violation in BOX Rule 12140(d)(3) and (e)(1)–(12) is appropriate because it will help clarify this distinction between offense and violation by updating the terminology to only use the term offense when the listed fines are meant to cover multiple

²⁰ See Securities Exchange Act Release No. 81398 (August 15, 2017), 82 FR 39630 (August 21, 2017) (SR–BOX–2017–26).

²¹ See NYSE Arca Rule 10.12.

violations. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges.

General Responsibilities of Floor Brokers. The Exchange is proposing to amend Rule 12140(e)(1), General Responsibilities of Floor Brokers pursuant to BOX Rule 7570, to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring the sanctions in line with the sanctions imposed by NYSE Arca.²² Rule 12140(e)(1) currently permits the Exchange to apply a fine of \$500 for the first occurrence, \$1,000 for a second occurrence, \$2,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any rolling twenty-four-month period. The proposed rule change updates the fine schedule to provide that, within any twenty-four-month rolling period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, \$5,000 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Broker who violates Rule 7580(e) regarding the failure to use due diligence when handling an order, to cause the order to be executed at the best price or prices available to him in accordance with the Rules of the Exchange shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.

²² See NYSE Arca Rule 10.12(k)(i)(1).

Number of violations within any rolling 24-month period	Sanction
Second Offense	\$2,500.
Third Offense	\$5,000.
Subsequent Offenses	Formal Disciplinary Action.

Trading Conduct and Order & Decorum on the Trading Floor. The Exchange is also proposing to amend Rule 12140(e)(4) Trading Conduct and Order & Decorum on the Trading Floor pursuant to BOX Rule 2120(b)–(d), to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change brings these sanctions in line with the sanctions imposed by NYSE Arca.²³ Rule 12140(e)(4) currently permits the Exchange to apply a fine of \$250 for the first occurrence, \$500 for a second occurrence, \$1,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any twenty-four-month rolling period. The proposed rule change updates the fine schedule to provide that, within any twenty-four-month rolling period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,000 for a second offense, \$3,500 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 2120(b)–(d) regarding Trading Floor Conduct and decorum shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,000.
Third Offense	\$3,500.
Subsequent Offenses	Formal Disciplinary Action.

Floor Participant Not Available to Reconcile an Uncompared Trade. The Exchange is proposing to amend Rule 12140(e)(6) Floor Participant Not Available to Reconcile an Uncompared Trade pursuant to BOX Rule 8530, to increase and strengthen the sanctions imposed under this section. The

Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change brings these sanctions in line with the sanctions imposed by NYSE Arca.²⁴ Rule 12140(e)(6) currently permits the Exchange to apply a fine of \$500 for the first occurrence, \$1,000 for a second occurrence, \$2,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any twenty-four-month rolling period. The proposed rule change updates the fine schedule to provide that the Exchange may apply a fine of \$500 for the first offense, \$1,000 for a second offense, \$2,500 for a third offense, and may proceed with formal disciplinary action for any subsequent offenses within any rolling twenty-four-month period. Under this proposed amendment, any Floor Participant who violates Rule 8530 regarding the resolution of uncompared trades shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$500.
Second Offense	\$1,000.
Third Offense	\$2,500.
Subsequent Offenses	Formal Disciplinary Action.

Floor Participant Communications and Equipment. The Exchange is also proposing to amend Rule 12140(e)(7) Floor Participant Communications and Equipment pursuant to BOX Rule 7660, to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change brings these sanctions in line with the sanctions imposed by NYSE Arca.²⁵ Rule 12140(e)(7) currently permits the Exchange to apply a fine of \$250 for the first occurrence, \$500 for a

second occurrence, \$1,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any twenty-four-month rolling period. The proposed rule change updates the fine schedule to provide that, within any twenty-four-month rolling period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, and \$3,500 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 7660 regarding Floor Participant Communications and Equipment shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,500.
Third Offense	\$3,500.
Subsequent Offenses	Formal Disciplinary Action.

Improper Vocalization of a Trade. The Exchange is also proposing to amend Rule 12140(e)(8) Improper Vocalization of a Trade pursuant to BOX Rule 100(b)(5), to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring these sanctions in line with the sanctions imposed by NYSE Arca.²⁶ Rule 12140(e)(8) currently permits the Exchange to apply a fine of \$250 for the first occurrence, \$500 for a second occurrence, \$1,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any rolling twenty-four-month period. The proposed rule change updates the fine schedule to provide that, within any rolling twenty-four-month period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, \$3,500 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 100(b)(5) regarding the requirements for public

²³ See NYSE Arca Rule 10.12(k)(i)(16).

²⁴ See NYSE Arca Rule 10.12(k)(i)(9).

²⁵ See NYSE Arca Rule 10.12(k)(i)(12).

²⁶ See NYSE Arca Rule 10.12(k)(i)(14).

outcry shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,500.
Third Offense	\$3,500.
Subsequent Offenses	Formal Disciplinary Action.

Floor Market Maker Failure to Comply with Quotation Requirements. The Exchange is also proposing to amend Rule 12140(e)(9) Floor Market Maker Failure to Comply with Quotation Requirements pursuant to BOX Rule 8510(c)(2), to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring these sanctions in line with the sanctions imposed by NYSE Arca.²⁷ Rule 12140(e)(9) currently permits the Exchange to apply a fine of \$250 for the first occurrence, \$500 for a second occurrence, \$1,000 for a third occurrence, and formal disciplinary action for subsequent occurrences within any rolling twenty-four-month period. The proposed rule change updates the fine schedule to provide that, within any rolling twenty-four-month period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, and \$3,500 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 8510(c)(2) regarding a Floor Market Maker's Obligation of Continuous Open Outcry Quoting shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,500.
Third Offense	\$3,500.
Subsequent Offenses	Formal Disciplinary Action.

Floor Market Maker Quote Spread Parameters. The Exchange is also

proposing to amend Rule 12140(e)(10) Floor Market Maker Quote Spread Parameters pursuant to BOX Rule 8510(d)(1), to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring these sanctions in line with the sanctions imposed by NYSE Arca.²⁸ Rule 12140(e)(10) currently permits the Exchange to give a letter of caution for a first occurrence, apply a fine of \$250 for a second occurrence, apply a fine of \$500 for a third occurrence, and proceed with formal disciplinary action for subsequent occurrences within any rolling twenty-four-month period. The proposed rule change updates the fine schedule to provide that, within any rolling twenty-four-month period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, \$3,500 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 8510(d)(1) regarding legal bid/ask differential requirements shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,500.
Third Offense	\$3,500.
Subsequent Offenses	Formal Disciplinary Action.

Floor Broker Failure to Honor the Priority of Bids and Offers. The Exchange is also proposing to amend Rule 12140(e)(11) Floor Broker Failure to Honor the Priority of Bids and Offers pursuant to BOX Rule 7610(d), to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to

more effectively deter trading floor violations. The Exchange notes that this proposed change will bring these sanctions in line with the sanctions imposed by NYSE Arca.²⁹ Rule 12140(e)(11) currently permits the Exchange to apply a fine of \$500 for a first occurrence, \$1,000 for a second occurrence, \$2,000 for a third occurrence, and may proceed with formal disciplinary action for subsequent occurrences within any rolling twenty-four-month period. The proposed rule change updates the fine schedule to provide that, within any rolling twenty-four-month period, the Exchange may apply a fine of \$1,000 for the first offense, \$2,500 for a second offense, \$5,000 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule 7610(d) regarding a Floor Broker's obligations in determining Time Priority Sequence shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$1,000.
Second Offense	\$2,500.
Third Offense	\$5,000.
Subsequent Offenses	Formal Disciplinary Action.

Floor Broker Failure to Identify a Broker Dealer Order. The Exchange is also proposing to amend Rule 12140(e)(12) Floor Broker Failure to Identify a Broker Dealer Order pursuant to BOX Rule IM-7580-2 to increase and strengthen the sanctions imposed under this section. The Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring these sanctions in line with the sanctions imposed by NYSE Arca.³⁰ Rule 12140(e)(12) currently permits the Exchange to apply a fine of \$250 for a first occurrence, \$500 for a second occurrence, \$1,000 for a third occurrence, and may proceed with formal disciplinary action for subsequent offenses within any rolling twenty-four-month period. The proposed rule change updates the fine

²⁷ See NYSE Arca Rule 10.12(k)(i)(39).

²⁸ See NYSE Arca Rule 10.12(k)(i)(41).

²⁹ See NYSE Arca Rule 10.12(k)(i)(40).

³⁰ See NYSE Arca Rule 10.12(k)(i)(11).

schedule to provide that, within any rolling twenty-four-month period, the Exchange may apply a fine of \$500 for the first offense, \$1,500 for a second offense, \$3,000 for a third offense, and formal disciplinary action for subsequent offenses. Under this proposed amendment, any Floor Participant who violates Rule IM-7580-2 regarding a Floor Broker's responsibility to identify its orders shall be subject to the fines listed below.

Number of violations within any rolling 24-month period	Sanction
First Offense	\$500.
Second Offense	\$1,500.
Third Offense	\$3,000.
Subsequent Offenses	Formal Disciplinary Action.

The Exchange believes Exercise Limits (Rule 3140), Lead Market Maker Continuous Quoting (Rule 8050(e)), Maintenance, Retention, and Furnishing of Books, Records, and Other Information (Rule 10000), and Anti-Money Laundering Compliance Program (Rule 10070) to be minor in nature and consistent with violations at other options exchanges, and therefore proposes to add them to the list of rules in Rule 12140(d) eligible for a minor rule fine disposition. Particularly, the Exchange believes that violations of each of the rules listed above are suitable for incorporation into the MRVP because these violations are minor in nature and consistent with violations at other options exchange. The Exchange notes that the proposed change is intended to provide for greater consistency across the Exchange's MRVP and the MRVPs of the other options exchanges. As detailed above, the Exchange is also proposing to increase and strengthen the fines for certain minor rule violations under Rule 12140. The Exchange believes that the proposed increased fines will strengthen the Exchange's ability to carry out its oversight and enforcement responsibilities in cases where full disciplinary proceedings are unwarranted in view of the minor nature of the particular violation. Specifically, the proposed rule change is designed to prevent fraudulent and manipulative acts and practices because it will provide the Exchange the ability to issue greater fines and more effectively deter violative conduct.

The Exchange is also proposing to make additional technical and nonsubstantive changes to provide greater clarity and consistency within the Exchange's MRVP and with the MRVPs of the other options exchanges.

As a result of the proposed addition of Rules 12140(d)(10) and (d)(11) above, the proposed rule change subsequently renumbers current Rules 12140(d)(10), (11), (12), (13), and (14), to Rules 12140(d)(12), (13), (14), (15), and (16), respectively. The Exchange is also proposing to amend the language within the fine schedules to use the terms "and Thereafter" and "Subsequent" instead of "or more" when detailing the number of violations. The Exchange proposes to update or more to and thereafter in Rule 12140(d)(5) and (12),³¹ and or more to subsequent in Rules 12140(d)(7), and (13)–(15).³² There is no substantive difference in the Exchange's interpretation between or more and subsequent or and thereafter. The purpose of the change is to provide greater clarity within the Exchange's MRVP by using more consistent terminology. The Exchange believes these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in the administration of the MRVP. The Exchange notes that the proposed change is intended to provide for greater consistency within the Exchange's MRVP itself and with the MRVPs of the other options exchanges.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the "Act") and the rules and regulations thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.³³ Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)³⁴ requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in

securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. The Exchange believes the proposed rule change is consistent with the Section 6(b)(5)³⁵ requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers. The Exchange further believes that the proposed rule changes to Rule 12140(d) are consistent with Section 6(b)(6) of the Act,³⁶ which provides that members and persons associated with members shall be appropriately disciplined for violation of the provisions of the rules of the exchange, by expulsion, suspension, limitation of activities, functions, and operations, fine, censure, being suspended or barred from being associated with a member, or any other fitting sanction. As noted, the proposed rule change adds certain rules as eligible for a minor rule fine disposition under the Exchange's MRVP. The Exchange believes that violations of these proposed rules are minor in nature and will be more appropriately disciplined through the Exchange's MRVP and is proposing to amend the fine schedules applicable to these additional rules to appropriately sanctions such failures.

The Exchange also believes that the proposed change is designed to provide a fair procedure for the disciplining of members and persons associated with members, consistent with Sections 6(b)(7) and 6(d) of the Act.³⁷ Rule 12140, currently and as amended, does not preclude a Participant or person associated with or employed by a Participant from contesting an alleged violation and receiving a hearing on the matter with the same procedural rights through a litigated disciplinary proceeding. Finally, the Exchange believes that the proposed rule change will strengthen its ability to carry out its oversight responsibilities as a self-regulatory organization pursuant to the Act and reinforce its surveillance and enforcement functions.

The Exchange believes that the proposed rule change to add certain rules as eligible for a minor rule fine disposition under its MRVP, which it considers violations of such rules to be minor in nature and consistent with violations at other options exchange, will assist the Exchange in preventing fraudulent and manipulative acts and practices and promoting just and equitable principles of trade, and will

³¹ As noted above, this is current Rule 12140(d)(10), but the Exchange is proposing to renumber certain subsections under 12140(d) due to the proposed addition of Rule 12140(d)(10) and (11).

³² As previously noted, these are current Rule 12140(d)(11)–(13), but the Exchange is proposing to renumber certain subsections under 12140(d) due to the proposed addition of Rule 12140(d)(10) and (11).

³³ 15 U.S.C. 78f(b).

³⁴ 15 U.S.C. 78f(b)(5).

³⁵ *Id.*

³⁶ 15 U.S.C. 78f(b)(6).

³⁷ 15 U.S.C. 78f(b)(7) and 78f(d).

serve to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, protect investors and the public interest. The Exchange believes violations of the above-listed rules to be minor in nature and therefore proposes to add them to the list of rules in Rule 12140(d) eligible for a minor rule fine disposition. Particularly, the Exchange believes that violations of each of the rules listed above are suitable for incorporation into the MRVP because these violations are generally minor in nature and consistent with violations at other options exchange. Further, the Exchange will be able to carry out its regulatory responsibility more quickly and efficiently by incorporating these violations into the MRVP.

Specifically, the Exchange believes the adoption of Rule 12140(d)(10) Maintenance, Retention and Furnishing of Books, Records and Other Information pursuant to BOX Rule 10000 is appropriate because it will help deter BOX Participants from failing to make, keep current, and preserve such books and records as required, or failure to furnish such books and records in a timely manner upon request by the Exchange. The Exchange believes that adding this rule to the MRVP will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently. The Exchange believes that the lesser penalty of \$500 for an initial violation and then providing higher fines for second and third violations and the option of a fine of \$5000 or formal disciplinary proceedings for a fourth violation and thereafter during a rolling twenty-four-month period is appropriate. This will allow the Exchange to levy progressively larger fines and greater penalties against repeat-offenders. The Exchange believes this fine structure may serve to deter repeat-offenders while providing a reasonable penalty for a first offense within a rolling twenty-four-month period. The Exchange believes that adding this rule to the MRVP will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently in regard to violations of BOX Rule 10000.

The Exchange believes the adoption of Rule 12140(d)(11), Anti-Money Laundering Compliance Program pursuant to BOX Rule 10070 is appropriate because it will help deter BOX Participants from failing to satisfy the requirements of the anti-money laundering compliance program. The Exchange believes that adding this rule to the MRVP will allow the Exchange to carry out its regulatory responsibility

more quickly and efficiently in regard to violations of BOX Rule 10070. The Exchange believes that the proposed fine structure permitting the Exchange to apply a fine of \$1,000 for a first violation and \$2,500 for subsequent violations is appropriate as this will effectively penalize both first time and repeat offenders. The Exchange believes that the proposed fines will be sufficient to warn against and help deter potentially violative conduct. The Exchange believes that adding this rule to the MRVP will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently in regard to violations of BOX Rule 10070.

The Exchange believes that amending Rule 12140(d)(6), Continuous Quotes to include continuous quoting violations by Lead Marker Makers pursuant to BOX Rule 8055(c)(1) is appropriate because it will allow the Exchange to carry out its regulatory responsibility quickly and efficiently in a manner that is consistent with the way it handles Market Maker continuous quoting violations. The Exchange notes that Cboe Options, and NYSE Arca have rule provisions in their minor rule violation plans that address Market Maker and Lead Market Maker continuous quoting obligations.³⁸ Rule 12140(d)(6) currently permits the Exchange to give a letter of caution for the first violation within one calendar year. For subsequent offenses during the same period, the fine schedule permits the Exchange to issue a fine of \$300 per day. The proposed rule change increases and strengthens the fine schedule to provide that, during one calendar year, the Exchange may give a letter of caution for a first violation, may apply a fine of \$1,500 for a second violation, may apply a fine of \$3,000 for a third violation, and may proceed with formal disciplinary action for subsequent offenses. The Exchange believes that maintaining the lesser penalty (letter of caution) for a first offense and then providing higher fines for second and third offenses and, ultimately, formal disciplinary proceedings for any subsequent offenses during one calendar year is appropriate. This will allow the Exchange to levy progressively larger fines and greater penalties against repeat-offenders (as opposed to a fine range for any offenses that may come after a first offense). The Exchange believes this fine structure may serve to deter repeat-offenders while providing reasonable warning for a first offense within one calendar year. The Exchange notes that the proposed

fines will bring the sanctions for violations of continuous quoting obligations in line with the sanctions currently imposed by Cboe Options.³⁹

The Exchange believes that adding Lead Market Maker Continuous Quoting to Rule 12140(d)(6) within the MRVP will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently in regard to violations of BOX Rule 8055(c)(1). The Exchange notes that the proposed change will also provide for greater consistency across the Exchange's MRVP and the MRVPs of the other options exchanges. The Exchange believes violations of these rules to be minor in nature and would be more appropriately disciplined through the Exchange's MRVP. As described above, and as is the case for all rule violations covered under Rule 12140(d) and (e), the Exchange may determine that a violation of Market-Maker quoting obligations is intentional, egregious, or otherwise not minor in nature and choose to proceed under the Exchange's formal disciplinary rules rather than its MRVP.

The Exchange believes that amending Rule 12140(d)(1), Position Limits, to include violations of exercise limits pursuant to BOX Rule 3140 is appropriate because it will allow the Exchange to carry out its regulatory responsibility quickly and efficiently in a manner that is consistent with the way it handles violations of position limits. Violations of position and exercise limits on the Exchange generally occur contemporaneously, so adding exercise limits to the existing position limits minor rule violation will allow the Exchange to address these related violations more effectively. The Exchange is proposing to keep the fine levels for exercise limit violations the same as the current fine levels for position limits. The Exchange notes that this proposal is consistent with the MRVPs in place at Cboe Options, NYSE American, and NYSE Arca.⁴⁰

The Exchange believes that increasing and strengthening the sanctions in Rule 12140(d)(5) and (12) is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing these sanctions will allow the Exchange to provide more appropriate punishments and more effectively deter violations of this nature. As such, the Exchange believes that this will assist the Exchange in preventing fraudulent and manipulative

³⁹ See Cboe Options Rule 13.15(g)(9).

³⁸ See Cboe Options Rule 13.15(g)(9). See also NYSE American Rule 9217(iii)(17). See also NYSE Arca Rule 10.12(k)(i)(39).

⁴⁰ See Cboe Options Rule 13.15(g)(1). See also NYSE American Rule 9217(iii)(17). See also NYSE Arca Rule 10.12(k)(i)(21).

acts and practices and promoting just and equitable principles of trade and will serve to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, protect investors and the public interest.

The Exchange believes that the proposed rule change to adopt Rule 12140(d)(10) and (11), and amend Rule 12140(d)(1), (5), (6), (10), (12), (13), and (14) will assist the Exchange in preventing fraudulent and manipulative acts and practices and promoting just and equitable principles of trade and will serve to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, protect investors and the public interest. The Exchange notes that the proposed updates to the minor rule violations and subsequent sanctions will bring them more in line with the MRVPs in place at NYSE American, NYSE Arca, and Cboe Options, will promote greater consistency across the options exchanges and reduce investor confusion.

The Exchange believes that the proposed technical and clarifying changes are appropriate and benefit investors by adding clarity to the rules. The Exchange believes that the proposed rule change to renumber current Rules 12140(d)(10), (11), (12), (13), and (14), to Rules 12140(d)(12), (13), (14), (15), and (16), respectively, will benefit investors by adding clarity to the rules. The Exchange believes that updating the language to use “offense” instead of “occurrence” and “rolling” instead of “running” within the fine schedule is appropriate will provide greater consistency in the terminology used within the Exchange’s MRVP and with the MRVPs of the other options exchanges. There is no substantive difference in the Exchange’s interpretation between offense and occurrence and running and rolling. The purpose of the change is to provide greater clarity within the Exchange’s MRVP by using more consistent terminology throughout. The Exchange also believes that amending the language within the fine schedules to use the terms “and Thereafter” and “Subsequent” instead of “or more” when detailing the number of violations will provide more clarity and may reduce investor confusion. There is no substantive difference in the Exchange’s interpretation between “or more” and “subsequent” or “and thereafter”. The purpose of the change is to provide greater clarity within the Exchange’s MRVP by using more consistent terminology. The Exchange believes

these technical and nonsubstantive changes are reasonable and appropriate because they will increase readability of the MRVP and help prevent investor confusion. Further, these proposed changes will allow the Exchange to carry out its regulatory responsibility more quickly and efficiently by reducing confusion regarding terminology in its administration of the MRVP. The Exchange notes that the proposed change will also provide for greater consistency between the Exchange’s MRVP and the MRVPs of the other options exchanges, which is designed to benefit investors by providing more consistent language among the various options exchanges.

The Exchange believes that the proposed rule change to update the fine schedule and language applicable to minor rule violations related to certain Trading Floor violations listed in Rule 12140(e) to increase the sanctions will assist the Exchange in preventing fraudulent and manipulative acts and practices and promoting just and equitable principles of trade, and will serve to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, protect investors and the public interest. Particularly, the Exchange believes that updating the fine schedule applicable to minor rule violations related to certain Trading Floor violations does not directly impact trading on the Exchange, maintenance of a fair and orderly market, and/or customer protection. The Exchange adopted the minor rule violations and corresponding fines under Rule 12140(e) in 2017 following the establishment of the BOX Trading Floor.⁴¹ In 2017, the Exchange believed it appropriate to adopt lower fine amounts as the new trading floor was established and to be more consistent with the other fines listed within the Exchange’s MRVP. However, the Exchange’s Trading Floor is now well-established, and the Exchange believes that increasing and strengthening these sanctions is appropriate to prevent participants from trading on BOX in order to get lower fines for violative conduct. The Exchange believes that increasing certain trading floor related sanctions to be more consistent with the other options exchanges will allow the Exchange to more effectively deter trading floor violations. The Exchange notes that this proposed change will bring the sanctions more in line with the fine schedules at NYSE Arca.⁴² As such, the proposed rule change is also

designed to benefit investors by providing more consistent penalties across the MRVPs of the Exchange and another exchange.

The Exchange believes that updating the language within certain minor rule violation listed within Rule 12140 to use the term “violation” instead of “occurrence” when detailing the number of violations within the fine schedules will provide greater clarity and consistency in the terminology used within the Exchange’s MRVP. Within the MRVP, the Exchange interprets violation to mean one instance and multiple violations may be deemed to constitute one offense. The Exchange believes that changing offense to violation in BOX Rule 12140(d)(3) and (e)(1)–(12) is appropriate because it will help clarify this distinction between offense and violation by updating the language in the MRVP to only use the term offense when the listed fines cover multiple violations grouped together. The Exchange also believes that the proposed technical changes to renumber and update the language in certain minor rule violations would not be inconsistent with the public interest and the protection of investors because investors will not be harmed and in fact would benefit from increased clarity and transparency, thereby reducing potential confusion.

In requesting the proposed additions to BOX Rule 12140(d), the Exchange in no way minimizes the importance of compliance with Exchange Rules and all other rules subject to the imposition of fines under the MRVP. Minor rule fines provide a meaningful sanction for minor or technical violations of rules when the conduct at issue does not warrant stronger, immediately reportable disciplinary sanctions. The inclusion of a rule in the Exchange’s MRVP does not minimize the importance of compliance with the rule, nor does it preclude the Exchange from choosing to pursue violations of eligible rules through a Letter of Consent if the nature of the violations or prior disciplinary history warrants more significant sanctions. Rather, the Exchange believes that the proposed rule change will strengthen the Exchange’s ability to carry out its oversight and enforcement responsibilities in cases where full disciplinary proceedings are unwarranted in view of the minor nature of the particular violation. Rather, the option to impose a minor rule sanction gives the Exchange additional flexibility to administer its enforcement program in the most effective and efficient manner while still fully meeting the Exchange’s remedial objectives in addressing violative

⁴¹ See *supra* note 14.

⁴² See NYSE Arca Rule 10.12.

conduct. Specifically, the proposed rule change is designed to prevent fraudulent and manipulative acts and practices because it will provide the Exchange the ability to issue a minor rule fine for violations relating to the Anti-Money Laundering Compliance Program (Rule 10070), Lead Market Maker Continuous Quoting (Rule 8055), Exercise Limits (Rule 3140), and Maintenance, Retention and Furnishing of Books, Records and Other Information (Rule 10000) where a more formal disciplinary action may not be warranted or appropriate.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The proposed rule change is not intended to address competitive issues but rather is concerned solely with updating its MRVP in connection with rules eligible for a minor rule fine disposition. The Exchange believes the proposed rule changes, overall, will strengthen the Exchange's ability to carry out its oversight and enforcement functions and deter potential violative conduct. The Exchange notes that the proposed additional violations are similar to minor rule violations designated in the MRVPs on other options exchanges.⁴³

The Exchange believes the proposed rule changes, overall, will strengthen the Exchange's ability to carry out its oversight and enforcement functions and deter potential violative conduct. Further, the proposal relates to the Exchange's role and responsibilities as a self-regulatory organization and the manner in which it disciplines its Participants and associated persons for violations of its rules. As such, the Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

- (A) By order approve or disapprove the proposed rule change, or
- (B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include File Number SR-BOX-2022-08 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090. All submissions should refer to File Number SR-BOX-2022-08. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the

provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-BOX-2022-08, and should be submitted on or before April 21, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.⁴⁴

J. Matthew DeLesDernier,

Assistant Secretary.

[FR Doc. 2022-08481 Filed 4-20-22; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-94730; File No. SR-IEX-2022-03]

Self-Regulatory Organizations: Investors Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Adopt on a Permanent Basis the Pilot Program for Market-Wide Circuit Breakers

April 15, 2022.

Pursuant to Section 19(b)(1) ¹ of the Securities Exchange Act of 1934 (the "Act") ² and Rule 19b-4 thereunder,³ notice is hereby given that, on April 15, 2022, the Investors Exchange LLC ("IEX" or the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

⁴³ Cboe Options, NYSE American, and NYSE Arca have rule provisions in their minor rule violation plans that address exercise limits and market maker continuous quoting obligations. NYSE Arca and Cboe Options have rule provisions in their MRVPs that address failures related to AML Program Implementation. Additionally, NYSE Arca has rule provisions in its MRVP that address various recordkeeping violations. See Cboe Options Rule 13.15(g). See also NYSE American Rule 9217. See also NYSE Arca Rule 10.12.

⁴⁴ 17 CFR 200.30-3(a)(12).

¹ 15 U.S.C. 78s(b)(1).

² 15 U.S.C. 78a.

³ 17 CFR 240.19b-4.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

Pursuant to the provisions of Section 19(b)(1) under the Act,⁴ and Rule 19b-4 thereunder,⁵ the Exchange is filing with the Commission a proposed rule change to amend IEX Rule 11.280 to adopt on a permanent basis the pilot program for Market-Wide Circuit Breakers. IEX has designated this rule change as “non-controversial” under Section 19(b)(3)(A) of the Act⁶ and provided the Commission with the notice required by Rule 19b-4(f)(6) thereunder.⁷

The text of the proposed rule change is available at the Exchange's website at www.iextrading.com, at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

On March 16, 2022, the Commission approved the proposal of the New York Stock Exchange LLC (“NYSE”), to adopt on a permanent basis the pilot program for Market-Wide Circuit Breakers (“MWCB”) in NYSE Rule 7.12.⁸ The Exchange now proposes to adopt the same change to make permanent the MWCB pilot program in IEX Rule 11.280.

The Pilot Rules

The MWCB rules, including the Exchange's Rule 11.280, provide an important, automatic mechanism that is invoked to promote stability and investor confidence during periods of

significant stress when cash equities securities experience extreme market-wide declines. The MWCB rules are designed to slow the effects of extreme price declines through coordinated trading halts across both cash equity and equity options securities markets.

The cash equities rules governing MWCBs were first adopted in 1988 and, in 2012, all U.S. cash equity exchanges and FINRA amended their cash equities uniform rules on a pilot basis⁹ (the “Pilot Rules,” *i.e.*, for IEX, Rule 11.280(a)–(d) and (f)¹⁰). The Pilot Rules currently provide for trading halts in all cash equity securities during a severe market decline as measured by a single-day decline in the S&P 500 Index (“SPX”).¹¹ Under the Pilot Rules, a market-wide trading halt will be triggered if SPX declines in price by specified percentages from the prior day's closing price of that index. The triggers are set at three circuit breaker thresholds: 7% (Level 1), 13% (Level 2), and 20% (Level 3). A market decline that triggers a Level 1 or Level 2 halt after 9:30 a.m. and before 3:25 p.m. would halt market-wide trading for 15 minutes, while a similar market decline at or after 3:25 p.m. would not halt market-wide trading. (Level 1 and Level 2 halts may occur only once a day.) A market decline that triggers a Level 3 halt at any time during the trading day would halt market-wide trading for the remainder of the trading day.

The Commission approved the Pilot Rules, the term of which was to coincide with the pilot period for the Plan to Address Extraordinary Market Volatility Pursuant to Rule 608 of Regulation NMS (the “LULD Plan”),¹²

⁹ See Securities Exchange Act Release No. 67090 (May 31, 2012), 77 FR 33531 (June 6, 2012) (SR-BATS-2011-038; SR-BYX-2011-025; SR-BX-2011-068; SR-CBOE-2011-087; SR-C2-2011-024; SR-CHX-2011-30; SR-EDGA-2011-31; SR-EDGX-2011-30; SR-FINRA-2011-054; SR-ISE-2011-61; SR-NASDAQ-2011-131; SR-NSX-2011-11; SR-NYSE-2011-48; SR-NYSEAmex-2011-73; SR-NYSEArca-2011-68; SR-Phlx-2011-129) (“Pilot Rules Approval Order”).

¹⁰ IEX's Pilot Rule has been effective since its approval for registration as a national securities exchange in 2016. See Securities Exchange Act Release No. 78101 (June 17, 2016), 81 FR 41142 (June 23, 2016) (File No. 10-222).

¹¹ The rules of the equity options exchanges similarly provide for a halt in trading if the cash equity exchanges invoke a MWCB Halt. See, *e.g.*, NYSE Arca Rule 6.65–O(d)(4).

¹² See Securities Exchange Act Release No. 67091 (May 31, 2012), 77 FR 33498 (June 6, 2012). An amendment to the LULD Plan adding IEX as a Participant was filed with the Commission on August 11, 2016, and became effective upon filing pursuant to Rule 608(b)(3)(iii) of the Act. See Securities Exchange Act Release No. 78703 (August 26, 2016), 81 FR 60397 (September 1, 2016) (File No. 4-631). The LULD Plan provides a mechanism to address extraordinary market volatility in individual securities.

including any extensions to the pilot period for the LULD Plan.¹³ In April 2019, the Commission approved an amendment to the LULD Plan for it to operate on a permanent, rather than pilot, basis.¹⁴ In light of the proposal to make the LULD Plan permanent, the Exchange amended Rule 11.280 to untie the Pilot Rules' effectiveness from that of the LULD Plan and to extend the Pilot Rules' effectiveness to the close of business on October 18, 2019.¹⁵ The Exchange then filed to extend the pilot to the close of business on October 18, 2020,¹⁶ October 18, 2021,¹⁷ March 18, 2022,¹⁸ and April 18, 2022.¹⁹

The MWCB Working Group Study

Beginning in February 2020, at the outset of the COVID-19 pandemic, the markets experienced increased volatility, culminating in four MWCB Level 1 halts on March 9, 12, 16, and 18, 2020. In each instance, pursuant to the Pilot Rules, the markets halted as intended upon a 7% drop in SPX and did not start the process to resume trading until the prescribed 15-minute halt period ended.

On September 17, 2020, the Director of the Commission's Division of Trading and Markets asked the SROs to conduct a study of the design and operation of the Pilot Rules and the LULD Plan during the period of volatility in March 2020. In response to the request, the SROs created a MWCB “Working Group” composed of SRO representatives and industry advisers that included members of the advisory committees to both the LULD Plan and the NMS Plans governing the collection, consolidation, and dissemination of last-sale transaction reports and quotations in NMS Stocks. The Working Group met regularly from September 2020 through March 2021 to consider the Commission's request, review data, and compile its study.

¹³ See, *e.g.*, Securities Exchange Act Release No. 78703 (August 26, 2016), 81 FR 60397 (September 1, 2016) (File No. 4-631) (describing the several extensions of the LULD Plan pilot period).

¹⁴ See Securities Exchange Act Release No. 85623 (April 11, 2019), 84 FR 16086 (April 17, 2019).

¹⁵ See Securities Exchange Act Release No. 85576 (April 9, 2019), 84 FR 15237 (April 15, 2019) (SR-IEX-2019-04).

¹⁶ See Securities Exchange Act Release No. 87298 (October 15, 2019), 84 FR 56255 (October 21, 2019) (SR-IEX-2019-11).

¹⁷ See Securities Exchange Act Release No. 90128 (October 8, 2020), 85 FR 65127 (October 14, 2020) (SR-IEX-2020-17).

¹⁸ See Securities Exchange Act Release No. 93323 (October 14, 2021), 86 FR 58125 (October 20, 2021) (SR-IEX-2021-12).

¹⁹ See Securities Exchange Act Release No. 94448 (March 17, 2022), 87 FR 16515 (March 23, 2022) (SR-IEX-2022-01).

⁴ 15 U.S.C. 78s(b)(1).

⁵ 17 CFR 240.19b-4.

⁶ 15 U.S.C. 78s(b)(3)(A).

⁷ 17 CFR 240.19b-4.

⁸ See Securities Exchange Act Release No. 94441 (March 16, 2022), 87 FR 16286 (March 22, 2022) (SR-NYSE-2021-40).

On March 31, 2021, the MWCB Working Group submitted its study (the “Study”) to the Commission.²⁰ The Study included an evaluation of the operation of the Pilot Rules during the March 2020 events and an evaluation of the design of the current MWCB system. In the Study, the Working Group concluded: (1) The MWCB mechanism set out in the Pilot Rules worked as intended during the March 2020 events; (2) the MWCB halts triggered in March 2020 appear to have had the intended effect of calming volatility in the market, without causing harm; (3) the design of the MWCB mechanism with respect to reference value (SPX), trigger levels (7%/13%/20%), and halt times (15 minutes) is appropriate; (4) the change implemented in Amendment 10 to the LULD Plan did not likely have any negative impact on MWCB functionality; and (5) no changes should be made to the mechanism to prevent the market from halting shortly after the opening of regular trading hours at 9:30 a.m.

In light of those conclusions, the MWCB Working Group also made several recommendations, including that (1) the Pilot Rules should be made permanent without any changes, and (2) SROs should adopt a rule requiring all designated Regulation SCI firms to participate in at least one Level 1/Level 2 MWCB test each year and to verify their participation via attestation.²¹

Proposal To Make the Pilot Rules Permanent

On July 16, 2021, NYSE proposed a rule change to make the Pilot Rules permanent, consistent with the Working Group’s recommendations.²² On March 16, 2022, the Commission approved NYSE’s proposal.²³

Consistent with the Commission’s approval of NYSE’s proposal, the Exchange now proposes that the Pilot Rules (*i.e.*, Rule 11.280(a)–(d) and (f)) be made permanent. To accomplish this, the Exchange proposes to remove the first three sentences in Rule 11.280(a), which currently provide: (i) That the provisions of paragraphs (a) through (d) and (f) of Rule 11.280 shall be in effect during a pilot period that expires at the close of business on April 18, 2022; (ii) that if the pilot is not either extended or

approved permanently at the end of the pilot period, the Exchange will amend Rule 11.280; and (iii) that the remaining provisions of Rule 11.280 are not subject to a pilot period and are in effect unless and until amended. The Exchange proposes to not change the last sentence of Rule 11.280(a), which reads in full: “[t]he Exchange shall halt trading in all stocks and shall not reopen for the time periods specified in this IEX Rule 11.280 if there is a Level 1, 2, or 3 Market Decline.” The Exchange does not propose any changes to paragraphs (b)–(h) of Rule 11.280.

Consistent with the Commission’s approval of NYSE’s proposal, the Exchange proposes to add new paragraphs (i)–(k) to Rule 11.280, as follows:

(i) Market-Wide Circuit Breaker (“MWCB”) Testing.

(1) The Exchange will participate in all industry-wide tests of the MWCB mechanism. Members designated pursuant to paragraph (b) of Rule 2.250 to participate in exchange back-up systems and mandatory testing are required to participate in at least one industry-wide MWCB test each year and to verify their participation in that test by attesting that they are able to or have attempted to:

(A) Receive and process MWCB halt messages from the securities information processors (“SIPs”);

(B) receive and process resume messages from the SIPs following a MWCB halt;

(C) receive and process market data from the SIPs relevant to MWCB halts; and

(D) send orders following a Level 1 or Level 2 MWCB halt in a manner consistent with their usual trading behavior.

(2) To the extent that a Member participating in a MWCB test is unable to receive and process any of the messages identified in paragraph (i)(1)(A)–(D) of this Rule, its attestation should notify the Exchange which messages it was unable to process and, if known, why.

(3) Members not designated pursuant to standards established in paragraph (b) of Rule 2.250 are permitted to participate in any MWCB test.

(j) In the event that a halt is triggered under this Rule following a Level 1, Level 2, or Level 3 Market Decline, the Exchange, together with other SROs and industry representatives (the “MWCB Working Group”), will review such event. The MWCB Working Group will prepare a report that documents its analysis and recommendations and will provide that report to the Commission within 6 months of the event.

(k) In the event that there is (1) a Market Decline of more than 5%, or (2) an SRO implements a rule that changes its reopening process following a MWCB Halt, the Exchange, together with the MWCB Working Group, will review such event and consider whether any modifications should be made to this Rule. If the MWCB Working Group recommends that a modification should be made to this Rule, the MWCB Working Group will prepare a report that documents its analysis and recommendations and provide that report to the Commission.

2. Statutory Basis

The Exchange believes that the proposal to make the Pilot Rules permanent is consistent with the requirements of Sections 6(b) of the Act,²⁴ in general, and furthers the objectives of Section 6(b)(5) of the Act,²⁵ in particular, in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest.

The Pilot Rules set out in Rule 11.280(a)–(d) and (f) are an important, automatic mechanism that is invoked to promote stability and investor confidence during periods of significant market stress when securities markets experience broad-based declines. The four MWCB halts that occurred in March 2020 provided the Exchange, the other SROs, and market participants with real-world experience as to how the Pilot Rules actually function in practice. Based on the Working Group’s Study and the Exchange’s own analysis of those events, the Exchange believes that making the Pilot Rules permanent would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest.

Specifically, the Exchange believes that making the Pilot Rules permanent would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest, because the Pilot Rules worked as intended during the March 2020 events. As detailed above, the markets were in communication before, during, and after each of the MWCB

²⁰ See *Report of the Market-Wide Circuit Breaker (“MWCB”) Working Group Regarding the March 2020 MWCB Events*, submitted March 31, 2021 (the “Study”), available at https://www.nyse.com/publicdocs/nyse/markets/nyse/Report_of_the_Market-Wide_Circuit_Breaker_Working_Group.pdf.

²¹ See *id.* at 46.

²² See Securities Exchange Act Release No. 92428 (July 16, 2021), 86 FR 38776 (July 22, 2021) (SR–NYSE–2021–40).

²³ See *supra* note 8.

²⁴ 15 U.S.C. 78f(b).

²⁵ 15 U.S.C. 78f(b)(5).

Halts that occurred in March 2020. All 9,000+ equity symbols were successfully halted in a timely manner when SPX declined 7% from the previous day's closing value, as designed. The Exchange believes that market participants would benefit from having the Pilot Rules made permanent because such market participants are familiar with the design and operation of the MWCB mechanism set out in the Pilot Rules, and know from experience that it has functioned as intended on multiple occasions under real-life stress conditions. Accordingly, the Exchange believes that making the Pilot Rules permanent would enhance investor confidence in the ability of the markets to successfully halt as intended when under extreme stress.

The Exchange further believes that making the Pilot Rules permanent would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest, because the halts that were triggered pursuant to the Pilot Rules in March 2020 appear to have had the intended effect of calming volatility in the market without causing harm. As detailed above, after studying a variety of metrics concerning opening and reopening auctions, quote volatility, and other factors, the Exchange concluded that there was no significant difference in the percentage of securities that opened on a trade versus on a quote for the four days in March 2020 with MWCB Halts, versus the other periods studied. In addition, while the post-MWCB Halt reopening auctions were smaller than typical opening auctions, the size of those post-MWCB Halt reopening auctions plus the earlier initial opening auctions in those symbols was on average equal to opening auctions in January 2020. The Exchange believes this indicates that the MWCB Halts on the four March 2020 days did not cause liquidity to evaporate. Finally, the Exchange observes that while quote volatility was generally higher on the four days in March 2020 with MWCB Halts as compared to the other periods studied, quote volatility stabilized following the MWCB Halts at levels similar to the January 2020 levels, and LULD Trading Pauses worked as designed to address any additional volatility later in the day. From this evidence, the Exchange concludes that the Pilot Rules actually calmed volatility on the four MWCB Halt days in March 2020, without causing liquidity to evaporate or

otherwise harming the market. As such, the Exchange believes that making the Pilot Rules permanent would remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest.

The Exchange believes that making the Pilot Rules permanent without any changes would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest, because the current design of the MWCB mechanism as set out in the Pilot Rules remains appropriate. As detailed above, the Exchange considered whether SPX should be replaced as the reference value, whether the current trigger levels (7%/13%/20%) and halt times (15 minutes for Level 1 and 2 halts) should be modified, and whether changes should be made to prevent the market from halting shortly after the opening of regular trading hours at 9:30 a.m., and concluded that the MWCB mechanism set out in the Pilot Rules remains appropriate, for the reasons cited above. The Exchange believes that public confidence in the MWCB mechanism would be enhanced by the Pilot Rules being made permanent without any changes, given investors' familiarity with the Pilot Rules and their successful functioning in March 2020.

The Exchange believes that proposed paragraph (i) regarding MWCB testing is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest. The Working Group recommended that all cash equities exchanges adopt a rule requiring all designated Regulation SCI firms to participate in MWCB testing and to attest to their participation. The Exchange believes that these requirements would promote the stability of the markets and enhance investor confidence in the MWCB mechanism and the protections that it provides to the markets and to investors. The Exchange further believes that requiring firms participating in a MWCB test to identify any inability to process messages pertaining to such MWCB test would contribute to a fair and orderly market by flagging potential issues that should be corrected. The Exchange would preserve such attestations pursuant to its obligations to retain books and records of the Exchange.

The Exchange believes that proposed paragraph (j) would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest. Having the MWCB Working Group review any halt triggered under Rule 11.280 and prepare a report of its analysis and recommendations would permit the Exchange, along with other market participants and the Commission, to evaluate such event and determine whether any modifications should be made to Rule 11.280 in the public interest. Preparation of such a report within 6 months of the event would permit the Exchange, along with the MWCB Working Group, sufficient time to analyze such halt and prepare their recommendations.

The Exchange believes that proposed paragraph (k) would benefit market participants, promote just and equitable principles of trade, remove impediments to and perfect the mechanism of a free and open market and a national market system, and protect investors and the public interest. Having the MWCB Working Group review instances of a Market Decline of more than 5% or an SRO implementing a rule that changes its reopening process following a MWCB Halt would allow the MWCB Working Group to identify situations where it recommends that Rule 11.280 be modified in the public interest. In such situations where the MWCB Working Group recommends that a modification should be made to Rule 11.280, the MWCB Working Group would prepare a report that documents its analysis and recommendations and provide that report to the Commission, thereby removing impediments to and perfecting the mechanism of a free and open market and a national market system while protecting investors and the public interest.

For the foregoing reasons, the Exchange believes that the proposed change is consistent with the Act.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposed change is not intended to address competition, but rather, makes permanent the current MWCB Pilot Rules for the protection of the markets. The Exchange believes that making the current MWCB Pilot Rules permanent would have no discernable burden on

competition at all, since the Pilot Rules have already been in effect since 2012 and would be made permanent without any changes. Moreover, because the MWCB mechanism contained in the Pilot Rules requires all exchanges and all market participants to cease trading at the same time, making the Pilot Rules permanent would not provide a competitive advantage to any exchange or any class of market participants.

Further, the Exchange understands that the other SROs will submit substantively identical proposals to the Commission. Thus, the proposed rule change will help to ensure consistency across SROs without implicating any competitive issues.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A)(iii) of the Act²⁶ and subparagraph (f)(6) of Rule 19b-4 thereunder.²⁷

A proposed rule change filed under Rule 19b-4(f)(6)²⁸ normally does not become operative prior to 30 days after the date of the filing. However, pursuant to Rule 19b-4(f)(6)(iii),²⁹ the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange asked that the Commission waive the 30 day operative delay so that the proposal may become operative immediately upon filing. Waiver of the 30-day operative delay would allow the Exchange to immediately provide the protections included in this proposal in the event of a MWCB halt, which is consistent with the protection of investors and the

public interest. Therefore, the Commission hereby waives the 30-day operative delay and designates the proposed rule change as operative upon filing.³⁰

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)³¹ of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an email to rule-comments@sec.gov. Please include File Number SR-IEX-2022-03 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090. All submissions should refer to File Number SR-IEX-2022-03. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the

provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange.

All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions.

You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-IEX-2022-03 and should be submitted on or before May 12, 2022.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.³²

J. Matthew DeLesDernier,
Assistant Secretary.

[FR Doc. 2022-08482 Filed 4-20-22; 8:45 am]

BILLING CODE 8011-01-P

SMALL BUSINESS ADMINISTRATION

Data Collection Available for Public Comments

ACTION: 60-Day notice and request for comments.

SUMMARY: The Small Business Administration (SBA) intends to request approval, from the Office of Management and Budget (OMB) for the collection of information described below. The Paperwork Reduction Act (PRA) requires federal agencies to publish a notice in the **Federal Register** concerning each proposed collection of information before submission to OMB, and to allow 60 days for public comment in response to the notice. This notice complies with that requirement.

DATES: Submit comments on or before June 21, 2022.

ADDRESSES: Send all comments via email to PPP-IFR@sba.gov, with the Subject "SBA Form 3173 Comments".

FOR FURTHER INFORMATION CONTACT: Adrienne Grierson, Small Business Administration, Office of Financial Program Operations, adrienne.grierson@sba.gov or, or Agency Clearance Officer Curtis B. Rich, curtis.rich@sba.gov, (202) 205-7030, Small Business Administration.

SUPPLEMENTARY INFORMATION: SBA received funds under the American

²⁶ 15 U.S.C. 78s(b)(3)(A)(iii).

²⁷ 17 CFR 240.19b-4(f)(6). In addition, Rule 19b-4(f)(6) requires a self-regulatory organization to give the Commission written notice of its intent to file the proposed rule change at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

²⁸ 17 CFR 240.19b-4(f)(6).

²⁹ 17 CFR 240.19b-4(f)(6)(iii).

³⁰ For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

³¹ 15 U.S.C. 78s(b)(2)(B).

³² 17 CFR 200.30-3(a)(12).

Rescue Plan Act of 2021 (ARP Act), Public Law 117–2, title V, sec. 5003 (March 11, 2021), to provide direct funds to Eating and Drinking establishments that meet certain conditions. Specifically, Section 5003 of the ARP Act establishes the Restaurant Revitalization Fund (RRF) program to provide direct funds of up to \$10 million dollars and limited to \$5 million dollars per location to certain eligible persons or entities: A restaurant, food stand, food truck, food cart, caterer, saloon, inn, tavern, bar, lounge, brewpub, tasting room, taproom, licensed facility or premise of a beverage alcohol producer where the public may taste, sample, or purchase products, or other similar place of business in which the public or patrons assemble for the primary purpose of being served food or drink. Section 5003(c)(6) of the ARP Act requires recipients to return to the Treasury any funds that the recipient did not use for allowable expenses by the end of the covered period, or if the recipient permanently ceased operations, not later than March 11, 2023. SBA plans to update Form 3173, RRF Post Award Report, to include a new reporting category for funds returned to SBA.

Solicitation of Public Comments

SBA is requesting comments on (a) Whether the collection of information is necessary for the agency to properly perform its functions; (b) whether the burden estimates are accurate; (c) whether there are ways to minimize the burden, including through the use of automated techniques or other forms of information technology; and (d) whether there are ways to enhance the quality, utility, and clarity of the information.

Summary of Information Collection

PRA Number: 3245–0424.

(1) *Title:* Restaurant Revitalization Fund Program Post Award Report.

Description of Respondents: Direct funding to Eating and Drinking establishments that meet certain conditions.

Form Number: SBA Form 3173.

Total Estimated Annual Responses: 131,306.

Total Estimated Annual Hour Burden: 63,127.

Curtis Rich,

Agency Clearance Officer.

[FR Doc. 2022–08526 Filed 4–20–22; 8:45 am]

BILLING CODE 8026–03–P

DEPARTMENT OF STATE

[Public Notice: 11703]

60-Day Notice of Proposed Information Collection: Electronic Medical Examination for Visa or Refugee Applicant

ACTION: Notice of request for public comment.

SUMMARY: The Department of State is seeking Office of Management and Budget (OMB) approval for the information collection described below. In accordance with the Paperwork Reduction Act of 1995, we are requesting comments on this collection from all interested individuals and organizations. The purpose of this notice is to allow 60 days for public comment preceding submission of the collection to OMB.

DATES: The Department will accept comments from the public up to June 21, 2022.

ADDRESSES: You may submit comments by any of the following methods:

- *Web:* Persons with access to the internet may comment on this notice by going to www.Regulations.gov. You can search for the document by entering “Docket Number: DOS–2022–0009 in the Search field. Then click the “Comment Now” button and complete the comment form.

- *Email:* PRA_BurdenComments@state.gov.

You must include the DS form number (if applicable), information collection title, and the OMB control number in the title or body of any correspondence. You should not submit case inquiries to either of the methods listed above. You should not include case numbers in any comment submitted via www.regulations.gov.

FOR FURTHER INFORMATION CONTACT:

Direct requests for additional information regarding the collection listed in this notice, including requests for copies of the proposed collection instrument and supporting documents, to Tonya Whigham, who may be reached at PRA_BurdenComments@state.gov or at 202–485–7635.

SUPPLEMENTARY INFORMATION:

- *Title of Information Collection:* Electronic Medical Examination for Visa Applicant or Refugee Applicant.
- *OMB Control Number:* 1405–0230.
- *Type of Request:* Extension of a Currently Approved Collection.
- *Originating Office:* Bureau of Consular Affairs, Visa Office (CA/VO).
- *Form Number:* DS–7794.
- *Respondents:* Visa Applicants; Follow-to-Join Refugee/Asylum

Applicants; Parole Applicants with Boarding Foils.

- *Estimated Number of Respondents:* 1,100,000.
- *Estimated Number of Responses:* 1,100,000.
- *Average Time per Response:* 1 hour.
- *Total Estimated Burden Time:* 1,100,000 annual hours.
- *Frequency:* Once per respondent.
- *Obligation to Respond:* Required to Obtain or Retain a Benefit.

We are soliciting public comments to permit the Department to:

- Evaluate whether the proposed information collection is necessary for the proper functions of the Department.
- Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used.

- Enhance the quality, utility, and clarity of the information to be collected.

- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this Notice are public record. Before including any detailed personal information, you should be aware that your comments as submitted, including your personal information, will be available for public review.

Abstract of Proposed Collection

This electronic collection records medical information necessary to determine whether visa applicants have medical conditions affecting the applicants' eligibility for a visa. This collection is also used to collect medical examination information from follow-to-join refugees and certain individuals who have been paroled into or are seeking parole into the United States.

Methodology

Approved panel physicians are granted access to an eMedical system by the Department to conduct medical examinations for determinations of eligibility for visas and other immigration benefits. The panel physician inputs the exam information into the eMedical portal, and it is transmitted to the Department for visa adjudication, follow-to-join refugee adjudication, and for the purpose of issuing boarding foils for certain individuals seeking parole from the Department of Homeland Security and is thereafter retained in the Department's systems. The information is also transmitted to the Centers for Disease Control and Prevention's

(“CDC”) systems. In some instances, if the individual has been admitted to the United States as a parolee or is seeking parole into the United States, the information is transmitted directly to the CDC, bypassing the Department. In relation to parolees, the data that is transmitted to the U.S. Government depends on the nature of parole as determined by the Department of Homeland Security.

Kevin E. Bryant,

Deputy Director, Office of Directives Management, Department of State.

[FR Doc. 2022–08537 Filed 4–20–22; 8:45 am]

BILLING CODE 4710–06–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. FAA 2021–0862]

Agency Information Collection

Activities: Requests for Comments; Clearance of a Renewed Approval of Information Collection: Disclosure of Seat Dimensions To Facilitate the Use of Child Safety Seats on Airplanes During Passenger-Carrying Operations

AGENCY: Federal Aviation Administration (FAA), Transportation (DOT).

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FAA invites public comments about our intention to request the Office of Management and Budget (OMB) approval to renew an information collection. The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on September 21, 2021. The collection involves each passenger carrying air carrier operating under the Code of Federal Regulations to post on the internet website of the air carrier the maximum dimensions of a child safety seat that can be used on those aircraft. The information to be collected will be used to facilitate the use of child restraint systems onboard airplanes and is required by section 412 of the FAA Modernization and Reform Act of 2012.

DATES: Written comments should be submitted by May 23, 2022.

ADDRESSES: Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting

“Currently under 30-day Review—Open for Public Comments” or by using the search function.

FOR FURTHER INFORMATION CONTACT:

Catherine Burnett by email at: Catherine.burnett@faa.gov; phone: 202–412–4952.

SUPPLEMENTARY INFORMATION: Public Comments Invited:

You are asked to comment on any aspect of this information collection, including (a) Whether the proposed collection of information is necessary for FAA’s performance; (b) the accuracy of the estimated burden; (c) ways for FAA to enhance the quality, utility and clarity of the information collection; and (d) ways that the burden could be minimized without reducing the quality of the collected information.

OMB Control Number: 2120–0760.

Title: Disclosure of Seat Dimensions To Facilitate the Use of Child Safety Seats on Airplanes During Passenger-Carrying Operations.

Form Numbers: N/A.

Type of Review: Renewal of an information collection.

Background: The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on September 21, 2021 (86 FR 52544). Section 412 of the FAA Modernization and Reform Act of 2012 (Pub. L. 112–95) specifically required the Federal Aviation Administration (FAA) to conduct rulemaking “[T]o require each air carrier operating under part 121 of title 14, Code of Federal Regulations to post on the internet website of the air carrier the maximum dimensions of a child safety seat that can be used on each aircraft operated by the air carrier to enable passengers to determine which child safety seats can be used on those aircraft.” As a result, the FAA amended 14 CFR 121.311, which requires passenger carrying air carriers to make available on their websites the width of the widest passenger seat in each class of service for each make, model and series of airplane used in passenger-carrying operations (80 FR 58575). Section 412 of Public Law 112–95 requires that all air carriers provide this required information on their internet websites. The vast majority of this burden occurred on a one-time basis as air carriers initially provided information on their websites in order to comply with the regulation. After initial implementation, the only time air carriers need to update their websites after initial implementation is when a new airplane make, model, or series is introduced to an air carrier’s fleet, or when an air carrier replaces the widest

or narrowest seats installed on an existing airplane make, model, or series with wider or narrower seats. The purpose of this collection is to facilitate the use of child restraint systems onboard airplanes by providing greater information to caregivers to help them determine whether a particular child restraint system will fit in an airplane seat.

Respondents: Approximately 44 Operators.

Frequency: As required by regulation.

Estimated Average Burden per Response: Varies per requirement.

Estimated Total Annual Burden: 327 Hours.

Issued in Washington, DC, on April 18, 2022.

Sandra L. Ray,

Aviation Safety Inspector, AFS–260.

[FR Doc. 2022–08523 Filed 4–20–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent of Waiver With Respect to Land; Willow Run Airport, Detroit, Michigan

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice.

SUMMARY: The FAA is considering a proposal to change 22.5 acres of airport land from aeronautical use to non-aeronautical use and to authorize the sale of airport property located at Willow Run Airport, Detroit, Michigan. The aforementioned land is not needed for aeronautical use. The property is located on the east side of the airport, located west of Beck Road, south of D Street, and east of Third Street and is currently vacant land. The proposed sale will allow the Great Lakes Water Authority (GLWA) to construct and operate a new water pump transfer station that will service the immediate surrounding community.

DATES: Comments must be received on or before May 23, 2022.

ADDRESSES: Documents are available for review by appointment at the FAA Detroit Airports District Office, Alex Erskine, Program Manager, 11677 South Wayne Road, Suite 107, Romulus, MI 48174. Telephone: (734) 229–2927/Fax: (734) 229–2950 and Wayne County Airport Authority, 11050 Rogell Drive, Bldg. #602, Detroit, MI 48242.

Written comments on the Sponsor’s request must be delivered or mailed to: Alex Erskine, Program Manager, Federal Aviation Administration, Detroit

Airports District Office, 11677 South Wayne Road, Suite 107, Romulus, MI 48174. Telephone: (734) 229-2927/Fax: (734) 229-2950.

FOR FURTHER INFORMATION CONTACT: Alex Erskine, Program Manager, Federal Aviation Administration, Detroit Airports District Office, 11677 South Wayne Road, Suite 107, Romulus, MI 48174. Telephone: (734) 229-2927/Fax: (734) 229-2950.

SUPPLEMENTARY INFORMATION: In accordance with section 47107(h) of Title 49, United States Code, this notice is required to be published in the **Federal Register** 30 days before modifying the land-use assurance that requires the property to be used for an aeronautical purpose.

The property is currently vacant land with no current or proposed future aeronautical use. The land proposed for release and disposal was originally transferred by quitclaim deed to The Regents of the University of Michigan on January 15, 1947 jointly between the United States of America and Reconstruction Finance Corporation, both acting by and through the War Assets Administrator under and pursuant to Executive Order 9689, dated January 31, 1946, and the powers and authority contained in the provisions of the Surplus Property Act of 1944, as amended. On January 31, 1977, the subject property was transferred by quitclaim deed to the Board of County Road Commissioners of the County of Wayne, Michigan. The Detroit County Airport Authority plans to sell the subject property at fair market value to the GLWA to construct and operate a new Ypsilanti water pump transfer station that will service the immediate surrounding community, and potentially the City of Ann Arbor in the future, with drinking water.

The disposition of proceeds from the sale of the airport property will be in accordance with FAA's Policy and Procedures Concerning the Use of Airport Revenue, published in the **Federal Register** on February 16, 1999 (64 FR 7696).

This notice announces that the FAA is considering the release of the subject airport property at the Willow Run Airport, Detroit, Michigan from federal land covenants, subject to a reservation for continuing right of flight as well as restrictions on the released property as required in FAA Order 5190.6B section 22.16. Approval does not constitute a commitment by the FAA to financially assist in the disposal of the subject airport property nor a determination of eligibility for grant-in-aid funding from the FAA.

A parcel of land located in the southeast quarter of section 8, T.3S., R.8E., Van Buren Township, Wayne County, Michigan described as commencing at the East corner of Section 8, T.3S, R.8E., Van Buren Township, Wayne County, Michigan; thence along the East Line of said Section 8, South 01 Degrees 06 minutes 52 seconds East 832.26 feet; thence south 88 degrees 01 minutes 15 seconds West 33.00 feet to the point of beginning; thence along the West line of Beck Road right of way South 01 degrees 06 minutes 52 seconds East 773.47 feet; thence South 88 degrees 01 minutes 15 seconds West 1262.12 feet; thence North 01 degrees 54 minutes 04 seconds West 773.38 feet; thence North 88 degrees 01 minutes 15 seconds East 1272.74 feet to the point of beginning. Containing 980,205.0 square feet and/or 22.5 acres of land. Subject to reservations, restrictions and easements of records, if any.

Issued in Romulus, Michigan, on April 15, 2022.

Stephanie Swann,

Deputy Manager, Detroit Airports District Office, FAA, Great Lakes Region.

[FR Doc. 2022-08490 Filed 4-20-22; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Renewal; Submission for OMB Review; Reverse Mortgage Products: Guidance for Managing Compliance and Reputation Risks

AGENCY: Office of the Comptroller of the Currency, Treasury (OCC).

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to comment on the renewal of an information collection, as required by the Paperwork Reduction Act of 1995 (PRA). An agency may not conduct or sponsor, and respondents are not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning renewal of its information collection titled "Reverse Mortgage Products: Guidance for Managing Compliance and Reputation Risks" (Guidance). The OCC

also is giving notice that it has sent the collection to OMB for review.

DATES: Comments must be received by May 23, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.
- *Mail:* Chief Counsel's Office, Attention: Comment Processing, 1557-0246, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E-218, Washington, DC 20219.
- *Fax:* (571) 465-4326.

Instructions: You must include "OCC" as the agency name and "1557-0246" in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Written comments and recommendations for the proposed information collection should also be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

On January 28, 2022, the OCC published a 60-day notice for this information collection, 87 FR 4711. You may review comments and other related materials that pertain to this information collection following the close of the 30-day comment period for this notice by the method set forth in the next bullet.

- *Viewing Comments Electronically:* Go to www.reginfo.gov. Hover over the "Information Collection Review" tab and click on "Information Collection Review" drop-down menu. From the "Currently under Review" drop-down menu, select "Department of Treasury" and then click "submit." This information collection can be located by searching by OMB control number "1557-0246" or "Reverse Mortgage Products: Guidance for Managing Compliance and Reputation Risks." Upon finding the appropriate

information collection, click on the related “ICR Reference Number.” On the next screen, select “View Supporting Statement and Other Documents” and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482–7340.

FOR FURTHER INFORMATION CONTACT:

Shaquita Merritt, Clearance Officer, (202) 649–5490, Chief Counsel’s Office, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E–218, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7–1–1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), Federal agencies must obtain approval from the OMB for each collection of information that they conduct or sponsor. “Collection of information” is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. The OCC asks that OMB extend its approval of the information collection in this document.

Abstract: On December 16, 2009, the OCC, FDIC, FRB, and NCUA sought comment on proposed Guidance,¹ which they subsequently issued in final form on August 17, 2010.² The Guidance focuses on the need to provide adequate information to consumers about reverse mortgage products, to provide qualified independent counseling to consumers considering these products, and to avoid potential conflicts of interest. The Guidance also addresses related policies, procedures, internal controls, and third party risk management.

- The information collection requirements contained in the Guidance address the implementation of policies and procedures, training, and program maintenance. Institutions offering reverse mortgages should have written policies and procedures that prohibit the practice of directing a consumer to a particular counseling agency or contacting a counselor on the consumer’s behalf.

- Policies should be clear so that originators do not have an inappropriate incentive to sell other products that appear linked to the granting of a mortgage.

- Legal and compliance reviews should include oversight of

compensation programs so that lending personnel are not improperly encouraged to direct consumers to particular products.

- Training should be designed so that relevant lending personnel are able to convey information to consumers about product terms and risks in a timely, accurate, and balanced manner.

Title of Information Collection: Reverse Mortgage Products: Guidance for Managing Compliance and Reputation Risks.

OMB Control No.: 1557–0246.

Affected Public: National banks, Federal savings associations, subsidiaries of national banks and Federal savings associations, and Federal branches or agencies of foreign banks.

Type of Review: Regular.

Estimated Number of Respondents: 12.

Frequency of Response: On occasion.

Total Estimated Annual Burden: 136 hours.

On January 28, 2022, the OCC published a 60-day notice for this information collection, 87 FR 4711. The OCC received one comment in response to the notice from a trade association. The commenter referenced the quality, utility, and clarity of the information collected in the context of the guidance itself. However, the commenter made no specific recommendations regarding the information collection. The OCC will consider the suggestions made by the commenter for revising the interagency Guidance in connection with any potential future discussions with the Board of Governors of the Federal Reserve and the FDIC.

Comments continue to be invited on:

(a) Whether the collection of information is necessary for the proper performance of the OCC’s functions, including whether the information has practical utility;

(b) The accuracy of the estimates of the burden of the information collection, including the validity of the methodology and assumptions used;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the information collection on respondents, including the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start up costs and costs of operation,

maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022–08532 Filed 4–20–22; 8:45 am]

BILLING CODE 4810–33–P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Revision; Comment Request; Regulation C—Home Mortgage Disclosure Act

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA). An agency may not conduct or sponsor, and respondents are not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning the revision of the information collection titled “Regulation C—Home Mortgage Disclosure Act.”

DATES: Comments must be submitted on or before June 21, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.
- *Mail:* Chief Counsel’s Office,

Attention: Comment Processing, Office of the Comptroller of the Currency, Attention: 1557–0345, 400 7th Street SW, Suite 3E–218, Washington, DC 20219.

- *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E–218, Washington, DC 20219.

- *Fax:* (571) 465–4326.

Instructions: You must include “OCC” as the agency name and “1557–0345” in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other

¹ 74 FR 66652.

² 75 FR 50801.

supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Following the close of this notice's 60-day comment period, the OCC will publish a second notice with a 30-day comment period. You may review comments and other related materials that pertain to this information collection beginning on the date of publication of the second notice for this collection by the method set forth in the next bullet. Following the close of this notice's 60-day comment period, the OCC will publish a second notice with a 30-day comment period.

- **Viewing Comments Electronically:** Go to www.reginfo.gov. Hover over the "Information Collection Review" drop down menu. From the "Currently under Review" drop-down menu, select "Department of Treasury" and then click "submit." This information collection can be located by searching by OMB control number "1557-0345" or "Regulation C—Home Mortgage Disclosure Act." Upon finding the appropriate information collection, click on the related "ICR Reference Number." On the next screen, select "View Supporting Statement and Other Documents" and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482-7340.

FOR FURTHER INFORMATION CONTACT:

Shaquita Merritt, OCC Clearance Officer, (202) 649-5490, Chief Counsel's Office, Office of the Comptroller of the Currency, 400 7th Street SW, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from the OMB for each collection of information that they conduct or sponsor.

"Collection of information" is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of title 44 requires Federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed revision of an existing collection of information,

before submitting the collection to OMB for approval. To comply with this requirement, the OCC is publishing this notice.

Title: Regulation C—Home Mortgage Disclosure Act.

OMB Control No.: 1557-0345.

Type of Review: Regular review.

Abstract: Regulation C,¹ which implements the Home Mortgage Disclosure Act (HMDA)² requires certain depository and non-depository institutions that make certain mortgage loans to collect, report, and disclose data about originations and purchases of mortgage loans as well as data about loan applications that do not result in originations. HMDA requires the generation of loan data that can be used to: (1) Help determine whether depository and non-depository institutions are serving the housing needs of their communities; (2) assist public officials in distributing public-sector investments so as to attract private investment to areas where it is needed; and (3) assist in identifying possible discriminatory lending patterns and enforcing anti-discrimination statutes.

Twelve CFR 1003.5 requires the disclosure and reporting of data on mortgage loans. Section 1003.5(a)(1)(i) provides that by March 1 following the calendar year for which data are collected and recorded, a financial institution must submit its annual loan/application register in electronic format to the appropriate Federal agency at the address identified by such agency. An authorized representative of the financial institution with knowledge of the data submitted must certify to the accuracy and completeness of data submitted. The financial institution must retain a copy of its annual loan/application register for at least three years.

Section 1003.5(a)(1)(ii) provides that within 60 calendar days after the end of each calendar quarter except the fourth quarter, a financial institution that reported for the preceding calendar year at least 60,000 covered loans and applications, combined, excluding purchased covered loans, must submit to the appropriate Federal agency its loan/application register containing all data required to be recorded for that quarter. The financial institution must submit its quarterly loan/application register pursuant to in electronic format at the address identified by the appropriate Federal agency for the institution.

¹ 12 CFR part 1003.

² 12 U.S.C. 2801-2811.

Under section 1003.5(a)(2), a financial institution that is a subsidiary of a bank or savings association must complete a separate loan/application register. The subsidiary must submit the loan/application register, directly or through its parent, to the appropriate Federal agency for the subsidiary's parent at the address identified by the agency.

Section 1003.5(b)(1) provides that the Federal Financial Institutions Examination Council (FFIEC) will make available a disclosure statement based on the data each financial institution submits for the preceding calendar year.

Section 1003.5(b)(2) provides that no later than three business days after receiving notice from the FFIEC that a financial institution's disclosure statement is available, the financial institution must make available to the public upon request at its home office, and each branch office physically located in each Metropolitan Statistical Area (MSA) and each Metropolitan Division (MD), a written notice that clearly conveys that the institution's disclosure statement may be obtained on the CFPB's website. A financial institution must make this notice available for a period of three years.

Section 1003.5(c)(1) provides that a financial institution must make available to the public upon request at its home office, and each branch office physically located in each MSA and each MD, a written notice that clearly conveys that the institution's loan/application register, as modified by the CFPB to protect applicant and borrower privacy, may be obtained on the CFPB's website. A financial institution shall make available the notice following the calendar year for which the data are collected. A financial institution must make the notice available to the public for a period of five years.

Section 1003.5(d)(2) provides that a financial institution may make available to the public, at its discretion its disclosure statement or its loan/application register, as modified by the CFPB to protect applicant and borrower privacy.

Section 1003.5(e) provides that a financial institution must post a general notice about the availability of its HMDA data in the lobby of its home office and of each branch office physically located in each MSA and each MD. This notice must clearly convey that the institution's HMDA data is available on the CFPB's website.

Affected Public: Businesses or other for-profit.

Burden Estimates:

Estimated Number of Respondents: 437.

Estimated Annual Burden: 609,100 hours.

Frequency of Response: On occasion. *Comments:* Comments submitted in response to this notice will be summarized and included in the request for OMB approval. All comments will become a matter of public record. Comments are invited on:

(a) Whether the collection of information is necessary for the proper performance of the functions of the OCC, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the information collection burden;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022-08534 Filed 4-20-22; 8:45 am]

BILLING CODE 4810-33-P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Renewal; Submission for OMB Review; Interagency Statement on Complex Structured Finance Transactions

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA). An agency may not conduct or sponsor, and respondents are not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning the renewal of an information collection titled "Interagency Statement on Complex Structured Finance Transactions." The

OCC also is giving notice that it has sent the collection to OMB for review.

DATES: Comments must be submitted on or before May 23, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.
- *Mail:* Chief Counsel's Office,

Attention: Comment Processing, 1557-0229, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

• *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Fax:* (571) 465-4326.

Instructions: You must include "OCC" as the agency name and "1557-0229" in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Written comments and recommendations for the proposed information collection should also be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

On February 2, 2022, the OCC published a 60-day notice for this information collection, 87 FR 5941. You may review comments and other related materials that pertain to this information collection following the close of the 30-day comment period for this notice by the method set forth in the next bullet.

• **Viewing Comments Electronically:** Go to www.reginfo.gov. Hover over the "Information Collection Review" tab and click on "Information Collection Review" drop-down menu. From the "Currently under Review" drop-down menu, select "Department of Treasury" and then click "submit." This information collection can be located by searching by OMB control number "1557-0229" or "Interagency Statement on Complex Structured Finance Transactions." Upon finding the appropriate information collection, click

on the related "ICR Reference Number." On the next screen, select "View Supporting Statement and Other Documents" and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482-7340.

FOR FURTHER INFORMATION CONTACT:

Shaquita Merritt, OCC Clearance Officer, (202) 649-5490, Chief Counsel's Office, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E-218, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501-3520), Federal agencies must obtain approval from the OMB for each collection of information they conduct or sponsor. "Collection of information" is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. The OCC asks that OMB extend its approval of the collection in this document.

Title: Interagency Statement on Complex Structured Finance Transactions.

OMB Control No.: 1557-0229.

Description: The Interagency Statement on Complex Structured Finance Transactions¹ describes the types of internal controls and risk management procedures that the agencies (OCC, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Securities and Exchange Commission) consider particularly effective in helping financial institutions identify and address the reputational, legal, and other risks associated with complex structured finance transactions. Those internal controls and risk management procedures form the basis of this information collection.

Affected Public: Businesses or other for-profit.

Type of Review: Regular.

Estimated Number of Respondents: 9.

Estimated Annual Burden: 225 hours.

Frequency of Response: On occasion.

On February 2, 2022, the OCC published a 60-day notice for this information collection, 87 FR 5941. No comments were received. Comments continue to be collected on:

(a) Whether the collection of information is necessary for the proper

¹ 72 FR 1372 (January 11, 2007).

performance of the functions of the OCC, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the information collection burden;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022-08533 Filed 4-20-22; 8:45 am]

BILLING CODE 4810-33-P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Renewal; Comment Request; Community and Economic Development Entities, Community Development Projects, and Other Public Welfare Investments

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA). An agency may not conduct or sponsor, and respondents are not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning its information collection titled, "Community and Economic Development Entities, Community Development Projects, and Other Public Welfare Investments."

DATES: Comments must be submitted on or before June 21, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.

- *Mail:* Chief Counsel's Office, Attention: Comment Processing, Office of the Comptroller of the Currency, Attention: 1557-0194, 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Fax:* (571) 465-4326.

Instructions: You must include "OCC" as the agency name and "1557-0194" in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Following the close of this notice's 60-day comment period, the OCC will publish a second notice with a 30-day comment period. You may review comments and other related materials that pertain to this information collection beginning on the date of publication of the second notice for this collection by the method set forth in the next bullet.

- *Viewing Comments Electronically:* Go to www.reginfo.gov. Hover over the "Information Collection Review" tab and click on "Information Collection Review" dropdown. Underneath the "Currently under Review" section heading, from the drop-down menu select "Department of Treasury" and then click "submit." This information collection can be located by searching by OMB control number "1557-0194" or "Community and Economic Development Entities, Community Development Projects, and Other Public Welfare Investments." Upon finding the appropriate information collection, click on the related "ICR Reference Number." On the next screen, select "View Supporting Statement and Other Documents" and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482-7340.

FOR FURTHER INFORMATION CONTACT: Shaquita Merritt, Clearance Officer, (202) 649-5490, Chief Counsel's Office, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E-

218, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501-3520), Federal agencies must obtain approval from OMB for each collection of information that they conduct or sponsor.

"Collection of information" is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of title 44 requires Federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, the OCC is publishing notice of the renewal of the collection of information set forth in this document.

Title: Community and Economic Development Entities, Community Development Projects, and Other Public Welfare Investments.

OMB Control No.: 1557-0194.

Description: This submission covers an existing regulation (12 CFR part 24), including the CD-1, National Bank Community Development Investments form, contained in 12 CFR part 24 Appendix 1, pursuant to which a national bank may notify the OCC, or request OCC approval, of certain community development investments.

Section 24.4(a) provides that a national bank may submit a written request to the OCC to exceed five percent of its capital and surplus for its aggregate, outstanding public welfare investments. The OCC may grant permission to the bank to make subsequent public welfare investments up to the approved investment limit without prior notification to, or approval by the OCC, using the after-the-fact notification process consistent with § 24.5(a).

Section 24.5(a) provides that an eligible national bank may make a public welfare investment without prior notification to, or approval by, the OCC if the bank submits an after-the-fact notification of an investment within 10 days of making the investment.

Section 24.5(a)(5) provides that a national bank that is not an eligible bank consistent with § 24.2(e), but that is at least adequately capitalized and has a composite rating of at least 3 with improving trends under the Uniform Financial Institutions Rating System,

may submit a letter to the OCC requesting authority to submit after-the-fact notices of its public welfare investments.

Section 24.5(b)(1) provides that if a national bank does not meet the requirements for after-the-fact notification, including if the bank's aggregate outstanding investments exceed the five percent limit, unless previously approved by the OCC for subsequent public welfare investments, the bank must submit an investment proposal to the OCC seeking permission to make the public welfare investment.

Type of Review: Regular.

Affected Public: Individuals; Businesses or other for-profit.

Estimated Number of Respondents: 1,200.

Frequency of Response: On occasion.

Estimated Total Annual Burden: 1,910 hours.

Comments submitted in response to this notice will be summarized, included in the request for OMB approval, and become a matter of public record. Comments are invited on:

(a) Whether the collection of information is necessary for the proper performance of the functions of the OCC, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the burden of the collection of information;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or startup costs and costs of operation, maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022-08530 Filed 4-20-22; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities; Information Collection Renewal; Submission for OMB Review; Leasing

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA). In accordance with the requirements of the PRA, the OCC may not conduct or sponsor, and respondents are not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning the renewal of its information collection titled, "Leasing." The OCC also is giving notice that it has sent the collection to OMB for review.

DATES: Comments must be received by May 23, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.

- *Mail:* Chief Counsel's Office,

Attention: Comment Processing, 1557-0206, Office of the Comptroller of the Currency, 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E-218, Washington, DC 20219.

- *Fax:* (571) 465-4326.

Instructions: You must include "OCC" as the agency name and "1557-0206" in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Written comments and recommendations for the proposed information collection should also be sent within 30 days of publication of this notice to www.reginfo.gov/public/do/PRAMain. Find this particular information collection by selecting "Currently under 30-day Review—Open for Public Comments" or by using the search function.

On January 18, 2022, the OCC published a 60-day notice for this information collection, 86 FR 2665. You may review comments and other related materials that pertain to this

information collection following the close of the 30-day comment period for this notice by the method set forth in the next bullet.

- *Viewing Comments Electronically:* Go to www.reginfo.gov. Hover over the "Information Collection Review" tab and click on "Information Collection Review" drop-down menu. From the "Currently under Review" drop-down menu, select "Department of Treasury" and then click "submit." This information collection can be located by searching by OMB control number "1557-0206" or "Leasing." Upon finding the appropriate information collection, click on the related "ICR Reference Number." On the next screen, select "View Supporting Statement and Other Documents" and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482-7340.

FOR FURTHER INFORMATION CONTACT:

Shaquita Merritt, Clearance Officer, (202) 649-5490, Chief Counsel's Office, Office of the Comptroller of the Currency, 400 7th Street SW, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from the OMB for each collection of information they conduct or sponsor. "Collection of information" is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. The OCC asks that OMB extend its approval of the collection in this notice.

Title: Leasing.

OMB Control No.: 1557-0206.

Description: Under 12 CFR 23.4(c), national banks must liquidate or re-lease property that is no longer subject to lease (off-lease property) as soon as practicable and not later than five years from the date the national bank acquires the legal right to possess or control the property. If a national bank wishes to extend the five-year holding period for up to an additional five years, it must obtain OCC approval. Twelve CFR 23.4(c) requires a national bank seeking an extension to provide a clearly convincing demonstration as to why any additional holding period is necessary. In addition, a national bank must value off-lease property at the lower of current fair market value or book value

promptly after the property becomes off-lease property.

Under 12 CFR 23.6, leases are subject to the lending limits prescribed by 12 U.S.C. 84, as implemented by 12 CFR part 32, or, if the lessee is an affiliate of the national bank, to the restrictions on transactions with affiliates prescribed by 12 U.S.C. 371c and 371c–1 and Regulation W, 12 CFR part 223. The OCC may also determine that other limits or restrictions apply.

Twelve U.S.C. 24 contains two separate provisions authorizing a national bank to acquire personal property for purposes of lease financing. A national bank may invest in personal property for purposes of lease financing under 12 U.S.C. 24(Seventh) (Section 24(Seventh) Leases) if the lease is a conforming lease, as defined in 12 CFR 23.2(d)(2), representing a noncancelable obligation of the lessee (*i.e.*, the lease serves as the functional equivalent of a loan). See 12 CFR 23.20. A national bank also may invest in tangible personal property for purposes of lease financing under the authority of 12 U.S.C. 24(Tenth) (CEBA Leases) if the related lease is a conforming lease as defined in 12 CFR 23.2(d)(1), which requires, among other things, that the aggregate book value of the property not exceed 10 percent of the national bank's consolidated assets. See 12 CFR 23.10.

Type of Review: Regular.

Affected Public: Businesses or other for-profit.

Estimated Number of Respondents: 29.

Frequency of Response: On occasion.

Estimated Total Annual Burden: 290.

On January 18, 2022, the OCC published a notice for 60 days of comments concerning the collection, 87 FR 2665. No comments were received. Comments continue to be solicited on:

(a) Whether the information collection is necessary for the proper performance of the OCC's functions, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the burden of the information collection, including the validity of the methodology and assumptions used;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of information collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation,

maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022–08531 Filed 4–20–22; 8:45 am]

BILLING CODE P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Information Collection Activities: Information Collection Renewal; Comment Request; General Reporting and Recordkeeping Requirements by Savings Associations

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA). An agency may not conduct or sponsor, and a respondent is not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC is soliciting comment concerning renewal of its information collection titled “General Reporting and Recordkeeping Requirements by Savings Associations.”

DATES: Comments must be submitted on or before June 21, 2022.

ADDRESSES: Commenters are encouraged to submit comments by email, if possible. You may submit comments by any of the following methods:

- *Email:* prainfo@occ.treas.gov.
- *Mail:* Chief Counsel's Office,

Attention: Comment Processing, Office of the Comptroller of the Currency, Attention: 1557–0266, 400 7th Street SW, Suite 3E–218, Washington, DC 20219.

- *Hand Delivery/Courier:* 400 7th Street SW, Suite 3E–218, Washington, DC 20219.

- *Fax:* (571) 465–4326.

Instructions: You must include “OCC” as the agency name and “1557–0266” in your comment. In general, the OCC will publish comments on www.reginfo.gov without change, including any business or personal information provided, such as name and address information, email addresses, or phone numbers. Comments received, including attachments and other

supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

Following the close of this notice's 60-day comment period, the OCC will publish a second notice with a 30-day comment period. You may review comments and other related materials that pertain to this information collection beginning on the date of publication of the second notice for this collection by the method set forth in the next bullet.

- *Viewing Comments Electronically:* Go to www.reginfo.gov. Hover over the “Information Collection Review” drop down menu. Click on “Information Collection Review.” From the “Currently under Review” drop-down menu, select “Department of Treasury” and then click “submit.” This information collection can be located by searching by OMB control number “1557–0266” or “General Reporting and Recordkeeping Requirements by Savings Associations.” Upon finding the appropriate information collection, click on the related “ICR Reference Number.” On the next screen, select “View Supporting Statement and Other Documents” and then click on the link to any comment listed at the bottom of the screen.

- For assistance in navigating www.reginfo.gov, please contact the Regulatory Information Service Center at (202) 482–7340.

FOR FURTHER INFORMATION CONTACT:

Shaquita Merritt, OCC Clearance Officer, (202) 649–5490, Chief Counsel's Office, Office of the Comptroller of the Currency, 400 7th Street SW, Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7–1–1 to access telecommunications relay services.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from the OMB for each collection of information that they conduct or sponsor.

“Collection of information” is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or disclose information to a third party. Section 3506(c)(2)(A) of title 44 requires Federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB

for approval. To comply with this requirement, the OCC is publishing notice of the renewal of this collection of information.

Title: General Reporting and Recordkeeping Requirements by Savings Associations.

OMB Control No.: 1557–0266.

Type of Review: Regular review.

Abstract: Federal savings associations must comply with the following regulations, which require them to establish prudent internal controls, so that examiners will have an accurate picture of their performance and condition:

- 12 CFR 144.8 (communications between members of a Federal mutual savings association);
- 12 CFR 163.47(e) (pension plans—records); and
- 12 CFR 163.76(c) (offers and sales of securities of a Federal savings association or its affiliates in any office of the savings association—form of certification).

Federal savings associations use the reports and records that the regulations require for internal management control purposes, and examiners use them to determine whether savings associations are being operated safely, soundly, and in compliance with regulations. Without these reporting and recordkeeping requirements, it would be difficult for institutions to establish prudent internal controls and would limit the ability of examiners to determine the accurate performance and condition of Federal savings associations.

Affected Public: Businesses or other for-profit.

Burden Estimates:

Estimated Number of Respondents: 266.

Estimated Total Burden: 26,833 hours.

Frequency of Response: On occasion.

Comments: Comments submitted in response to this notice will be summarized and included in the request for OMB approval. All comments will become a matter of public record. Comments are invited on:

(a) Whether the collections of information are necessary for the proper performance of the OCC's functions, including whether the information has practical utility;

(b) The accuracy of the OCC's estimates of the burden of the

information collections, including the validity of the methodology and assumptions used;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of information collections on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Theodore J. Dowd,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2022–08535 Filed 4–20–22; 8:45 a.m.]

BILLING CODE 4810–33–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Requesting Comments on Form 4136

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Internal Revenue Service, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995. The IRS is soliciting comments concerning Form 4136, Credit for Federal Tax Paid on Fuels.

DATES: Written comments should be received on or before June 21, 2022 to be assured of consideration.

ADDRESSES: Direct all written comments to Andres Garcia, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW, Washington, DC 20224, or by email to omb.unit@irs.gov. Include OMB Control No. 1545–0162 in the subject line of the message.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of this collection should be directed to Jon Callahan, (737) 800–7639, at Internal Revenue Service, Room

6526, 1111 Constitution Avenue NW, Washington, DC 20224, or through the internet at jon.r.callahan@irs.gov.

SUPPLEMENTARY INFORMATION: The IRS is currently seeking comments concerning the following information collection tools, reporting, and record-keeping requirements:

Title: Credit for Federal Tax Paid on Fuels.

OMB Number: 1545–0162.

Form Number: Form 4136.

Abstract: Internal Revenue Code section 34 allows a credit for federal excise tax paid on certain fuel uses. This form is used to figure the amount of the income tax credit. The data is used to verify the validity of the claim for the type of nontaxable or exempt use.

Current Actions: There is no change to the existing collection. However, the estimated number of responses was updated to eliminate duplication of the burden associated with individual respondents captured under OMB control number 1545–0074 and business respondents captured under OMB control number 1545–0123. The estimated time per respondent was also updated to more accurately reflect the information collection and record keeping requirements for the form as a whole.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations, and not-for-profit institutions.

Estimated Number of Responses: 2,140.

Estimated Time per Respondent: 37 hours, 23 minutes.

Estimated Total Annual Burden Hours: 80,015.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. Comments are invited on:

(a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the

information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information

technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: April 18, 2022.

Jon R. Callahan,

Tax Analyst.

[FR Doc. 2022-08504 Filed 4-20-22; 8:45 am]

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Part II

Department of Energy

10 CFR Parts 429 and 431

Energy Conservation Program: Test Procedures for Walk-In Coolers and Walk-In Freezers; Proposed Rule

DEPARTMENT OF ENERGY

10 CFR Parts 429 and 431

[EERE–2017–BT–TP–0010]

RIN 1904–AD78

Energy Conservation Program: Test Procedures for Walk-In Coolers and Walk-In Freezers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of proposed rulemaking and announcement of public webinar.

SUMMARY: The U.S. Department of Energy (“DOE”) proposes to amend the test procedures for walk-in coolers and walk-in freezers to harmonize with updated industry standards, revise the test methods to more fully represent field energy use, and better account for the range of walk-in cooler and walk-in freezer component equipment designs. DOE also proposes to revise certain definitions applicable to walk-ins. DOE is seeking comment from interested parties on the proposal and announcing a public meeting to collect comments and data on its proposal.

DATES: DOE will accept comments, data, and information regarding this proposal no later than June 21, 2022. *See* section V, “Public Participation,” for details. DOE will hold a webinar on Monday, May 9, from 1:00 p.m. to 5:00 p.m. *See* section V, “Public Participation,” for webinar registration information, participant instructions, and information about the capabilities available to webinar participants.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at www.regulations.gov, under docket number EERE–2017–BT–TP–0010. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments by email to WICF2017TP0010@ee.doe.gov. Include docket number EERE–2017–BT–TP–0010 in the subject line of the message.

No telefacsimiles (“faxes”) will be accepted. For detailed instructions on submitting comments and additional information on this process, *See* section V of this document.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing coronavirus 2019 (“COVID–19 pandemic”). DOE is currently

suspending receipt of public comments via postal mail and hand delivery/courier. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586–1445 to discuss the need for alternative arrangements. Once the COVID–19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Docket: The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts (if a public meeting is held), comments, and other supporting documents/materials, is available for review at www.regulations.gov. All documents in the docket are listed in the www.regulations.gov index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at www.regulations.gov/docket/EERE-2017-BT-TP-0010. The docket web page contains instructions on how to access all documents, including public comments, in the docket. *See* section V for information on how to submit comments through www.regulations.gov.

FOR FURTHER INFORMATION CONTACT:

Dr. Stephanie Johnson, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–2J, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 287–1943. Email ApplianceStandardsQuestions@ee.doe.gov.

Mr. Michael Kido, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–8145. Email: Michael.Kido@hq.doe.gov.

For further information on how to submit a comment, review other public comments and the docket, or participate in a public meeting (if one is held), contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: ApplianceStandardsQuestions@ee.doe.gov.

SUPPLEMENTARY INFORMATION: DOE proposes to maintain previously approved incorporations by reference and to incorporate by reference the following industry standards into part 431:

ANSI/AHRI Standard 420–2008, “Performance Rating of Forced-

Circulation Free-Delivery Unit Coolers for Refrigeration,” copyright 2008.

AHRI Standard 1250 (I–P)–2009, “Standard for Performance Rating of Walk-in Coolers and Freezers,” (including Errata sheet dated December 2015), copyright 2009, except Table 15 and Table 16.

AHRI Standard 1250–2020, “Standard for Performance Rating of Walk-in Coolers and Freezers,” copyright 2020.

Copies of AHRI 420–2008, AHRI 1250–2009, and AHRI 1250–2020 can be obtained from the Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201, or by going to www.ahrinet.org.

ANSI/ASHRAE Standard 16–2016, “Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity,” approved October 31, 2016.

ANSI/ASHRAE Standard 23.1–2010, “Methods of Testing for Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units that Operate at Subcritical Temperatures of the Refrigerant,” ANSI approved January 28, 2010.

ANSI/ASHRAE Standard 37–2009, “Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,” approved June 24, 2009.

Copies of ANSI/ASHRAE 16, ASHRAE 23.1–2010, and ANSI/ASHRAE 37 can be obtained from the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 180 Technology Parkway, Peachtree Corners, GA 30092, or by going to: www.ashrae.org.

ASTM C518–17, “Standard Test Method for Steady state Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,” ASTM approved May 1, 2017.

ASTM C1199–14, “Standard Test Method for Measuring the Steady state Thermal Transmittance of Fenestration Systems Using Hot Box Methods,” ASTM approved February 1, 2014.

Copies of ASTM C518–17 and ASTM C1199–14 can be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or by going to www.astm.org.

NFRC 102–2020 [E0A0], “Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.”

Copies of NFRC 102–2020 can be obtained from the National Fenestration Rating Council, 6305 Ivy Lane, Ste. 140, Greenbelt, MD 20770, or by going to www.nfrc.org/.

See section IV.M of this document for a further discussion of these standards.

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I. Authority and Background

Walk-in coolers and freezers (collectively, “WICFs” or “walk-ins”) are included in the list of “covered equipment” for which DOE is authorized to establish and amend energy conservation standards and test procedures. (42 U.S.C. 6311(1)(G)) DOE’s energy conservation standards and test procedures for WICFs are currently prescribed at subpart R of part 431 of title 10 of the Code of Federal Regulations (“CFR”). The following sections discuss DOE’s authority to establish test procedures for WICFs and relevant background information regarding DOE’s consideration of test procedures for this equipment.

A. Authority

The Energy Policy and Conservation Act, as amended (“EPCA”),¹ authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C.

¹ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020).

6291–6317) Title III, Part C² of EPCA, added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. This covered equipment includes walk-in coolers and walk-in freezers, the subject of this document. (42 U.S.C. 6311(1)(G))

Under EPCA, the energy conservation program consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards (“ECS”), and (4) certification and enforcement procedures. Relevant provisions of EPCA include definitions (42 U.S.C. 6311), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), energy conservation standards (42 U.S.C. 6313), and the authority to require information and reports from manufacturers (42 U.S.C. 6316).

The Federal testing requirements consist of test procedures that manufacturers of covered equipment must use as the basis for: (1) Certifying to DOE that their equipment complies with the applicable energy conservation standards adopted pursuant to EPCA (42 U.S.C. 6316(a); 42 U.S.C. 6295(s)), and (2) making representations about the efficiency of that equipment (42 U.S.C. 6314(d)). Similarly, DOE must use these test procedures to determine whether the equipment complies with relevant standards promulgated under EPCA. (42 U.S.C. 6316(a); 42 U.S.C. 6295(s))

Federal energy efficiency requirements for covered equipment established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6316(a) and 42 U.S.C. 6316(b); 42 U.S.C. 6297) DOE may, however, grant waivers of Federal pre-emption for particular State laws or regulations, in accordance with the procedures and other provisions of EPCA. (42 U.S.C. 6316(a))

Under 42 U.S.C. 6314, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered equipment. EPCA requires that any test procedures prescribed or amended under this section must be reasonably designed to produce test results that reflect the energy efficiency, energy use or estimated annual operating cost of a given type of covered equipment during a representative average use cycle and requires that test procedures not be unduly burdensome to conduct. (42 U.S.C. 6314(a)(2))

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered equipment, including walk-ins, to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect the energy efficiency, energy use, and estimated operating costs during a representative average use cycle. (42 U.S.C. 6314(a)(1))

In addition, if the Secretary determines that a test procedure amendment is warranted, the Secretary must publish proposed test procedures in the **Federal Register** and afford interested persons an opportunity (of not less than 45 days’ duration) to present oral and written data, views, and arguments on the proposed test procedures. (42 U.S.C. 6314(b)) If DOE determines that test procedure revisions are not appropriate, DOE must publish its determination not to amend the test procedures. (42 U.S.C. 6314(a)(1)(A)(ii)) DOE is publishing this notice of proposed rulemaking (“NOPR”) in satisfaction of the 7-year review requirement specified in EPCA.

B. Background

For measuring walk-in energy use, DOE has established separate test procedures for the principal components that make up a walk-in (*i.e.*, doors, panels, and refrigeration systems), with separate test metrics for each component. 10 CFR 431.304(b). For walk-in doors and display panels, the efficiency metric is daily energy consumption, measured in kilowatt-hours per day (“kWh/day”), which accounts for the thermal conduction through the door or display panel and the direct and indirect electricity use of any electrical components associated with the door. 10 CFR 431.304(b)(1)–(2) and 10 CFR part 431, subpart R, appendix A, “Uniform Test Method for the Measurement of Energy Consumption of the Components of Envelopes of Walk-In Coolers and Walk-In Freezers” (“appendix A”). The thermal transmittance through the door, which inputs into the calculation of thermal conduction, is determined using National Fenestration Rating Council (“NFRC”) 100–2010, “Procedure for Determining Fenestration U-factors” (“NFRC 100”).

For walk-in non-display panels and non-display doors, DOE codified in the CFR standards established in EPCA

based on the R-value metric,³ expressed in units of (h-ft²-°F/Btu),⁴ which is calculated as the thickness of the panel in inches (“in.”) divided by the K-factor.⁵ See 10 CFR 431.304(b)(3) and 10 CFR part 431, subpart R, appendix B, titled “Uniform Test Method for the Measurement of R-Value for Envelope Components of Walk-In Coolers and Walk-In Freezers” (“appendix B”). (See *also*, 42 U.S.C. 6314(a)(9)(A)) The K-factor is calculated based on American Society for Testing and Materials (“ASTM”) C518, “Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus” (“ASTM C518”), which is incorporated by reference at 10 CFR 431.303. *Id.*

For walk-in refrigeration systems, the efficiency metric is Annual Walk-in Energy Factor (“AWEF”), which is the ratio of the total heat, not including the heat generated by the operation of refrigeration systems, removed, in Btu, from a walk-in box during one-year period of usage for refrigeration to the total energy input of refrigeration systems, in watt-hours, during the same period. AWEF is determined by conducting the test procedure set forth in American National Standards Institute (“ANSI”)/Air-Conditioning, Heating, and Refrigeration Institute (“AHRI”) Standard 1250P (I–P), “2009 Standard for Performance Rating of Walk-In Coolers and Freezers,” (“AHRI 1250–2009”), with certain adjustments specified in the CFR. See 10 CFR 431.304(b)(4) and 10 CFR part 431 subpart R, appendix C, “Uniform Test Method for the Measurement of Net Capacity and AWEF of Walk-In Cooler and Walk-In Freezer Refrigeration Systems” (“subpart R, appendix C”). A manufacturer may also determine AWEF using an alternative efficiency determination method (“AEDM”). 10 CFR 429.53(a)(2)(iii). An AEDM enables a manufacturer to utilize computer-based or mathematical models for purposes of determining an equipment’s energy use or energy efficiency performance in lieu of testing, provided certain prerequisites have been met. 10 CFR 429.70(f).

On August 5, 2015, DOE published its intention to establish a working group

³ The R-value is the thermal resistance, or the capacity of an insulated material to resist heat-flow. See Section 3.3.3 of ASTM C518. See 42 U.S.C. 6313(f)(1)(C) for the EPCA R-value requirements for non-display panels and doors.

⁴ These symbols represent the following units of measurement—h: hour; ft²: square foot; °F: degrees Fahrenheit; Btu: British thermal unit.

⁵ The K-factor represents the thermal conductivity of a material, or its ability to conduct heat, in units of Btu-in/(h-ft²-°F). See Section 3.3.1 of ASTM C518.

² For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–1.

under the Appliance Standards and Rulemaking Federal Advisory Committee (“ASRAC”) to negotiate energy conservation standards to replace the standards established in the final rule published on June 3, 2014 (79 FR 32050; “June 2014 ECS final rule”). 80 FR 46521. The established working group (“ASRAC Working Group”) assembled its recommendations into a Term Sheet⁶ (Docket EERE–2015–BT–STD–0016, No. 56) that was presented to, and approved by, ASRAC on December 18, 2015 (“ASRAC Term Sheet”).

The ASRAC Term Sheet provided recommendations for energy conservation standards to replace standards that had been vacated by the United States Court of Appeals for the Fifth Circuit in a controlling order issued August 10, 2015. It also included recommendations regarding definitions for a number of terms related to the WICF regulations, as well as recommendations to amend the test procedure that the ASRAC Working Group viewed as necessary to properly implement the energy conservation standards recommendations. Consequently, DOE initiated both an energy conservation standards rulemaking and a test procedure

rulemaking in 2016 to implement these recommendations. The ASRAC Term Sheet also included recommendations for future amendments to the test procedures intended to make DOE’s test procedure more fully representative of walk-in energy use.

On December 28, 2016, DOE published a final rule amending the WICF test procedures (“December 2016 final rule”), consistent with the ASRAC Term Sheet recommendations and including provisions to facilitate implementation of energy conservation standards for walk-in components. 81 FR 95758. Subsequently, on July 10, 2017, DOE published a final rule amending the energy conservation standards for WICF refrigeration systems (“July 2017 ECS final rule”). 82 FR 31808.

AHRI published an updated industry test standard for walk-in refrigeration systems in 2020, “2020 Standard for Performance Rating of Walk-in Coolers and Freezers,” (“AHRI 1250–2020”). This test procedure included updated calculations for the determination of default values for equipment with electric defrost and hot gas defrost. DOE published a final rule for hot gas defrost unit coolers on March 26, 2021 (“March 2021 final rule”) that amended the test

procedure to rate hot gas defrost unit coolers using the modified default values for energy use and heat load contributions in AHRI 1250–2020. These amendments ensure that ratings for hot gas defrost unit coolers are consistent with those of electric defrost unit coolers. 86 FR 16027.

Under 10 CFR 431.401, any interested person may submit a petition for waiver from DOE’s test procedure requirements. DOE will grant a waiver from the test procedure requirements if DOE determines either that the basic model for which the waiver was requested contains a design characteristic that prevents testing of the basic model according to the prescribed test procedures, or that the prescribed test procedures evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data. 10 CFR 431.401(f)(2). DOE may grant the waiver subject to conditions, including adherence to alternate test procedures specified by DOE. *Id.* DOE has granted interim waivers and/or waivers to the manufacturers listed in Table I.1 from either appendix A or subpart R, appendix C.

TABLE I.1: MANUFACTURERS WHO RECEIVED A TEST PROCEDURE WAIVER/INTERIM WAIVER FROM DOE

Manufacturer	Subject	Case No.	Waiver from appendix
Jamison Door Company	PTO for Door Motors	2017–009	A
HH Technologies	PTO for Door Motors	2018–001	A
Senneca Holdings	PTO for Door Motors	2020–002	A
Hercules	PTO for Door Motors	2020–013	A
HTPG	CO ₂ Unit Coolers	2020–009	C
Hussmann	CO ₂ Unit Coolers	2020–010	C
Keeprite	CO ₂ Unit Coolers	2020–014	C
RefPlus, Inc.	CO ₂ Unit Coolers	2021–006	C
RSG	Multi-Circuit Single-Package Dedicated Systems	2022–004	C
Store It Cold	Single-Package Dedicated Systems	2018–002	C
CellarPro	Wine Cellar Refrigeration Systems	2019–009	C
Air Innovations	Wine Cellar Refrigeration Systems	2019–010	C
Vinotheque	Wine Cellar Refrigeration Systems	2019–011	C
Vinotemp	Wine Cellar Refrigeration Systems	2020–005	C
LRC Coil	Wine Cellar Refrigeration Systems	2020–024	C

On June 17, 2021, DOE published a request for information (“RFI”) to collect information and data to consider

amendments to DOE’s test procedures for walk-ins (“June 2021 RFI”). 86 FR 32332. DOE received comments in

response to the June 2021 RFI from the interested parties listed in Table I.2.

TABLE I.2 LIST OF COMMENTERS WITH WRITTEN SUBMISSIONS IN RESPONSE TO THE JUNE 2021 RFI

Commenter(s)	Reference in this NOPR	Commenter type
Air-Conditioning, Heating, & Refrigeration Institute	AHRI	Industry Association
Anthony International	Anthony	Manufacturer
Appliance Standards Awareness Project	ASAP	Efficiency Organization

⁶ Appliance Standards and Rulemaking Federal Advisory Committee Refrigeration Systems Walk-in

Coolers and Freezers Term Sheet, available at

<https://www.regulations.gov/document/EERE-2015-BT-STD-0016-0056>.

TABLE I.2 LIST OF COMMENTERS WITH WRITTEN SUBMISSIONS IN RESPONSE TO THE JUNE 2021 RFI—Continued

Commenter(s)	Reference in this NOPR	Commenter type
Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison; collectively, the California Investor-Owned Utilities.	CA IOUs	Utility Association
Daikin US Corporation	Daikin	Manufacturer
Husmann Corporation	Husmann	Manufacturer
Imperial Brown, Inc.	Imperial Brown	Manufacturer
Keeprite Refrigeration, Inc.	Keeprite	Manufacturer
Lennox International	Lennox	Manufacturer
National Refrigeration & Air Conditioning Canada Corp.	National Refrigeration	Manufacturer
Northwest Energy Efficiency Alliance	NEEA	Efficiency Organization
National Fenestration Rating Council	NFRC	Industry Association

In response to the June 2021 RFI, DOE also received comments specific to energy conservation standards (“ECS”), which it will address in a future walk-in ECS rulemaking notice.

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.⁷

II. Synopsis of the Notice of Proposed Rulemaking

In this NOPR, DOE is proposing to expand the scope of its walk-in coolers and freezers test procedure to include carbon dioxide (“CO₂”) unit coolers, multi-circuit single-packaged dedicated systems, and ducted fan coil units. DOE has also tentatively determined that liquid-cooled refrigeration systems are within the scope of DOE coverage authority for walk-ins but is not proposing to add an applicable test procedure at this time.

In this NOPR, DOE is proposing to alter the definitions of walk-in cooler and walk-in freezer, door, door surface area, and single-packaged dedicated systems. DOE is also proposing new definitions for door leaf, hinged vertical door, non-display door, roll-up door, sliding door, high-temperature refrigeration systems, ducted fan coil units, multi-circuit single-packaged dedicated systems, attached split systems, detachable single-packaged dedicated systems, CO₂ unit coolers, and hot gas defrost.

In this NOPR, DOE is proposing to make the following revisions to appendix A: (1) Reference NFRC 102–2020 as the applicable test procedure to determine door “U-factor” in place of NFRC 100 (DOE proposes to adopt AEDM provisions for doors in 10 CFR 429.53 to allow calculation of door

energy use representations); (2) provide further detail on and distinguish the area to be used for determining compliance with standards and the area used to calculate a thermal load from U-factor; (3) establish a percent time off (“PTO”) specific to door motors; and (4) reorganize appendix A so that it is easier to follow.

Additionally, DOE is proposing to modify appendix B to improve test representativeness and repeatability. Specifically, DOE is proposing to make the following revisions to appendix B: (1) Reference the updated industry standard ASTM C518–17; (2) include more detailed provisions for determining measuring insulation thickness and test specimen thickness; (3) provide additional guidance on determining parallelism and flatness of a test specimen; and (4) reorganize appendix B as a step-by-step procedure so it is easier to follow.

DOE is also proposing to include walk-in doors and walk-in panels in the list of covered equipment in the same sampling plan for enforcement testing that is used for walk-in refrigeration systems. See 10 CFR 429.110(e)(2).

DOE is proposing two sets of changes for the refrigeration system test procedure. One set of changes would be grouped into proposed revisions to subpart R, appendix C, and the other set of changes is being proposed through the establishment of a new appendix C1 to subpart R of part 431 (“appendix C1”). DOE has tentatively determined that the changes to subpart R, appendix C, would not affect AWEF ratings and therefore would not require any retesting or recertification. These proposed changes, if adopted, would be required starting 180 days after the test procedure final rule is published. DOE has tentatively determined, however, that the proposed appendix C1 would affect the measurement of energy use; therefore, DOE is proposing to establish a new metric, AWEF2, in appendix C1 which would require retesting and

recertification. The requirements proposed in appendix C1, if adopted, would take place on the compliance date of amended energy conservation standards that DOE may ultimately decide to adopt as part of a separate rulemaking assessing the technological feasibility and economic justification for such standards.

DOE is proposing to make the following revisions to subpart R, appendix C:

- (1) Specify refrigeration test room conditions;
- (2) provide for a temperature probe exception for small diameter refrigerant lines;
- (3) incorporate a test setup hierarchy for installation instructions for laboratories to follow when setting up a unit for test;
- (4) allow active cooling of the liquid line in order to achieve the required 3 °F subcooling at a refrigerant mass flow meter;
- (5) modify instrument accuracy and test tolerances; and
- (6) address current test procedure waivers for CO₂ unit coolers tested alone and high-temperature unit coolers tested alone by incorporating amendments appropriate for this equipment.

Additionally, DOE is proposing a new metric, AWEF2, associated with a new appendix C1, which would include the proposed changes to subpart R, appendix C. DOE is proposing the following provisions be included in appendix C1, which would be required to demonstrate compliance coincident with the compliance date of any amended energy conservation standards, should such standards be established:

- (1) Adoption of AHRI 1250–2020;
- (2) provide for testing single-packaged dedicated systems, detachable single-packaged dedicated systems, attached split systems, CO₂, variable-, two-, and multiple-capacity dedicated condensing units, indoor variable-, two- and multiple-capacity matched pairs,

⁷ The parenthetical reference provides a reference for information located in the docket of DOE’s rulemaking to develop test procedures for walk-ins. (Docket No. EERE–2017–BT–TP–0010, which is maintained at www.regulations.gov). The references are arranged as follows: Commenter name, comment docket ID number, page of that document.

matched refrigeration systems for high-temperature applications, and multi-circuit single-packaged dedicated systems;

(3) add a single-packaged dedicated system refrigerant enthalpy test procedure; and

(4) add a new energy metric, AWEF2, to reflect the proposed changes in the test procedure that would result in a significant change to energy use values.

Table II.1 summarizes the current DOE test procedure, DOE's proposed changes to the test procedure, the

attribution for each proposed change, and the location of the proposed test procedure.

TABLE II.1—SUMMARY OF CHANGES IN PROPOSED TEST PROCEDURE RELATIVE TO CURRENT TEST PROCEDURE

WICF component(s)	Current DOE test procedure	Proposed test procedure(s)	Attribution	Proposed in appendix
Doors and Display Panels.	Incorporates by reference NFRC 100–2010 for determining U-factor as part of determining energy consumption.	Incorporates by reference NFRC 102–2020 for determining U-factor and allows for AEDMs to be used for determining energy consumption.	Reduce test burden	A
Doors and Display Panels.	Uses surface area of the door or display panel external to the walk-in to convert U-factor into a conduction load.	Requires that area of the aperture or surface area used to determine the U-factor be used to convert U-factor into a conduction load.	Improve representative values.	A
Doors	Uses a percent time off value of 25 percent for door motors (as they are considered “other electricity-consuming devices”).	Establishes a percent time off value of 97 percent specific to door motors.	Improve representative values and addresses inconsistent values across waivers granted.	A
Non-display Doors and Panels.	Incorporates by reference ASTM C518–04.	Incorporates by reference ASTM C518–17.	Updates to the applicable industry test procedures.	B
Non-display Doors and Panels.	Does not include detailed provisions for determining and measuring total insulation thickness and test specimen thickness.	Includes detailed provisions for determining and measuring total insulation thickness and test specimen thickness.	Ensure test repeatability.	B
Non-display Doors and Panels.	Requires that the test specimen meet a parallelism and flatness tolerance of ± 0.03 inches but provides no guidance on measurement.	Provides guidance on determining parallelism and flatness of the test specimen.	Ensure test repeatability.	B
Refrigeration Systems ...	Does not include guidance on test room conditioning.	Includes guidance on test room conditioning.	Ensure test repeatability.	C
Refrigeration Systems ...	Does not include an allowance for measuring refrigerant temperatures with surface-mounted measuring instruments.	Includes an allowance for measuring refrigerant temperatures with surface-mounted measuring instruments for small diameter tubes.	Reduce test burden	C
Refrigeration Systems ...	Does not include guidance for unit charging or a setup condition hierarchy.	Includes guidance for unit charging and a setup condition hierarchy.	Ensure test repeatability.	C
Refrigeration Systems ...	Does not include provisions for testing CO ₂ unit coolers.	Includes provisions for testing CO ₂ unit coolers.	Improve representative values.	C
Refrigeration Systems ...	Does not include provisions for testing high-temperature unit coolers alone.	Includes provisions for testing high-temperature unit coolers alone.	Improve representative values.	C
Refrigeration Systems ...	Incorporates by reference AHRI 1250–2009, ASHRAE 23.1–2010, and AHRI 420–2008.	Incorporates by reference AHRI 1250–2020, ASHRAE 37, and ASHRAE 16.	Updates to the applicable industry test procedures.	C1
Refrigeration Systems ...	Single-packaged dedicated systems are tested using the refrigerant enthalpy method for matched pairs.	Includes multiple methods for testing single-packaged dedicated systems.	Improve representative values.	C1
Refrigeration Systems ...	Does not include provisions for testing attached split systems or detachable single-packaged dedicated systems.	Includes provisions for testing attached split systems or detachable single-packaged dedicated systems.	Improve representative values.	C1
Refrigeration Systems ...	Does not include provisions for testing multi-circuit single-packaged dedicated systems.	Includes provisions for testing multi-circuit single-packaged dedicated systems.	Improve representative values.	C1
Refrigeration Systems ...	Does not include provisions for testing ducted fan coil units.	Includes provisions for testing ducted fan coil units.	Improve representative values.	C1
Refrigeration Systems ...	Does not include provisions for testing high-temperature matched-pair and single-packaged dedicated systems.	Includes provisions for testing high-temperature matched-pair and single-packaged dedicated systems.	Improve representative values.	C1

TABLE II.1—SUMMARY OF CHANGES IN PROPOSED TEST PROCEDURE RELATIVE TO CURRENT TEST PROCEDURE—Continued

WICF component(s)	Current DOE test procedure	Proposed test procedure(s)	Attribution	Proposed in appendix
Refrigeration Systems ...	Does not include provisions for testing of variable- and multiple-capacity dedicated condensing units nor variable- and multiple-capacity outdoor matched pairs.	Includes provisions for testing of variable, two-, and multiple-capacity dedicated condensing units and variable, two-, and multiple-capacity outdoor matched pairs.	Improve representative values.	C1

DOE has tentatively determined that the proposed amendments described in section III of this NOPR would not alter the measured energy consumption of walk-in doors without motors or the R-value of walk-in non-display doors and non-display panels or require retesting or recertification solely as a result of DOE's adoption of the proposed amendments to the test procedures, if made final. Additionally, DOE has tentatively determined that the proposed amendments, if made final, would not increase the cost of testing.

Further, DOE has tentatively determined that the proposed amendments described in section III of this NOPR would alter the measured energy consumption or efficiency of walk-in doors with motors and would only require retesting or recertification because of DOE's adoption of the proposed amendments to the test procedures, if made final. Additionally, DOE has tentatively determined that the proposed amendments, if made final, would not increase the cost of testing for doors with motors.

DOE has also tentatively determined that the proposed amendments to subpart R, appendix C, described in section III.F of this NOPR would not alter the measured efficiency of walk-in refrigeration systems and would not require retesting or recertification as a result of DOE's adoption of the proposed amendments to the test procedures, if made final. Additionally, DOE has tentatively determined that the proposed amendments, if made final, would not increase the cost of testing.

Finally, DOE has tentatively determined that the proposed provisions of appendix C1 described in section III.G of this NOPR would alter the measured efficiency of walk-in refrigeration systems. However, the proposed procedure in appendix C1 would only require retesting or recertification when a future energy conservation standard would take effect. Additionally, DOE has tentatively determined that the proposed provisions in appendix C1, if made final, would increase the cost of testing.

Tentative cost estimates are discussed in section III.J of this document.

Discussion of DOE's proposed actions are addressed in detail in section III of this NOPR.

III. Discussion

In the following sections, DOE proposes certain amendments to its test procedures for walk-in doors, panels, and refrigeration systems. For each proposed amendment, DOE provides relevant background information, explains why the amendment merits consideration, discusses relevant public comments, and proposes a potential approach.

Many of the refrigeration system test procedure proposals under consideration in this NOPR stem from recommendations made by the ASRAC Working Group (*see* ASRAC Term Sheet Recommendation #6, EERE-2015-BT-STD-0016, No. 56). The remainder of the refrigeration system, door, and panel test procedure amendments proposed in this NOPR are in response to issues identified by DOE and stakeholders in the time since the publication of the December 2016 final rule, including through petitions for test procedure waivers.

A. Scope and Definitions

This NOPR applies to the test procedures for “walk-in coolers and walk-in freezers.” DOE defines “walk-in cooler and walk-in freezer” as: An enclosed storage space refrigerated to temperatures (1) above 32 °F for walk-in coolers and (2) at or below 32 °F for walk-in freezers, that can be walked into, and has a total chilled storage area of less than 3,000 square feet, but excluding equipment designed and marketed exclusively for medical, scientific, or research purposes. 10 CFR 431.302. (*See also* 42 U.S.C. 6311(20))

1. Scope

The following sections discuss considerations and proposals regarding the scope of equipment covered by DOE's test procedures for walk-ins. As discussed, the DOE test procedures and

standards apply to walk-in refrigeration systems, doors, and panels.

a. Liquid-Cooled Refrigeration Systems

A liquid-cooled refrigeration system rejects heat during the condensing process to a liquid that transports the heat to a remote location. This is in contrast to an air-cooled system, which rejects heat to ambient air during the condensing process. DOE understands that liquid-cooled refrigeration systems are typically used in facilities where either cooling water or glycol is plumbed throughout the building prior to installation of the refrigeration unit, although it is possible that some such systems use potable water for condenser cooling and dispose the water in a drain after it passes through the condenser. As discussed in the June 2021 RFI, liquid-cooled dedicated condensing units for walk-ins are readily available for a wide range of capacities and refrigerants from major walk-in refrigeration system manufacturers (*see for example*, Airdyne W-series indoor units (water-cooled), and Russell (water-cooled, glycol-cooled) ⁸ 86 FR 32332, 32334.

DOE notes that the EPCA definition for walk-ins makes no distinction on how the condenser is cooled. (42 U.S.C. 6311(20)(A)) However, the current DOE test procedure for walk-in refrigeration systems, which incorporates by reference AHRI 1250–2009, does not address how to test liquid-cooled systems. Additionally, liquid-cooled dedicated condensing units are outside the scope of AHRI 1250–2020, being specifically excluded in section 2.2.4.

In the June 2021 RFI, DOE requested comment on whether it should consider establishing a test procedure for liquid-cooled walk-in equipment. 86 FR 32332, 32334. Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann recommended against establishing a separate test procedure for liquid-cooled refrigeration systems due to the small market size for such systems. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 2; Keeprite, No. 12 at p. 1; National

⁸ *See* Docket No. EERE-2017-BT-TP-0010-0001, Docket No. EERE-2017-BT-TP-0010-0002, and Docket No. EERE-2017-BT-TP-0010-0003.

Refrigeration, No 17 at p. 1; Hussmann, No. 18 at p. 2) Lennox, AHRI, Keeprite, and Hussmann also explained that the type of coolant used has the most impact on efficiency for liquid-cooled systems; however, coolants are not specified by the WICF system manufacturer. These stakeholders asserted that liquid-cooled systems do not have a large potential for energy savings since purchasers, rather than WICF manufacturers, specify the coolant system. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 2; Keeprite, No. 12 at p. 1; Hussmann, No. 18 at p. 2) Keeprite also stated that liquid-cooled systems are generally more efficient than air cooled models. (Keeprite, No. 12 at p. 1)

ASAP recommended developing a test procedure for liquid-cooled systems since the systems are currently available in the market and there are no applicable test procedures. (ASAP, No. 13 at p. 1) ASAP stated that adopting test methods for liquid-cooled systems would provide purchasers with comparable ratings regardless of cooling type. *Id.* Daikin recommended considering EN 17432, “Packaged refrigerating units for walk-in cold rooms—Classification, performance and energy consumption testing” (“EN 17432”), which addresses water-cooled and liquid-cooled refrigeration systems. (Daikin, No. 17 at p. 1)

DOE reiterates that the scope of the walk-in definition includes liquid-cooled equipment. DOE recognizes the potential benefit of a test procedure for liquid-cooled walk-ins and the value that a reliable test procedure can provide to facilitate comparable representations of energy use for consumers. DOE has tentatively determined that liquid-cooled refrigeration systems may represent a small portion of the walk-in market and the potential for energy savings is likely limited. Therefore, although liquid-cooled refrigeration systems are considered to be covered equipment, DOE is not proposing to amend its procedures to include liquid-cooled refrigeration systems at this time.

b. Carbon Dioxide Systems

Currently, the DOE test procedure for walk-in refrigeration systems does not explicitly define scope based on refrigerant. *See* 10 CFR 431.301, 10 CFR 431.304, and appendix A. DOE understands that the current test procedure, which is based on AHRI 1250–2009 (incorporated by reference, 10 CFR 431.303(b)), specifies test conditions that may not be consistent with the design and operation of carbon dioxide (“CO₂”) refrigeration systems; *i.e.*, although AHRI 1250–2009 does not specifically exclude CO₂ systems, the

test method is not designed to accommodate such systems.

The DOE test procedure for unit coolers requires testing with a liquid inlet saturation temperature of 105 °F and a liquid inlet subcooling temperature of 9 °F, as specified by Tables 15 and 16 of AHRI 1250–2009. However, CO₂ has a critical temperature of 87.8 °F; therefore, it does not coexist as saturated liquid and gas above this temperature. The liquid inlet saturation temperature of 105 °F and the liquid inlet subcooling temperature of 9 °F specified in subpart R, appendix C, are not achievable by CO₂ unit coolers. DOE has granted waivers or interim waivers from subpart R, appendix C, for specific basic models of CO₂ unit coolers to the manufacturers listed in Table III.1 of this document. The alternate test procedure specified in these waivers modified the liquid inlet saturation temperature to 38 °F and the liquid inlet subcooling temperature to 5 °F. Pursuant to its waiver regulations, as soon as practicable after the granting of any waiver, DOE will publish in the **Federal Register** a notice of proposed rulemaking to amend its regulations so as to eliminate any need for the continuation of such waiver. 10 CFR 431.401(l). As soon thereafter as practicable, DOE will publish in the **Federal Register** a final rule to that effect. *Id.*

TABLE III.1—WAIVERS GRANTED TO MANUFACTURERS OF CO₂ WALK-IN REFRIGERATION SYSTEMS

Manufacturer	Interim waiver Federal Register citation	Waiver decision and order Federal Register citation
Heat Transfer Products Group (“HTPG”)	85 FR 83927 (Dec. 23, 2020)	86 FR 14887 (Mar. 19, 2021).
Hussmann Corporation (“Hussmann”)	86 FR 10046 (Feb. 18, 2021)	86 FR 24606 (May 7, 2021).
Keeprite Refrigeration (“Keeprite”)	86 FR 12433 (Mar. 3, 2021)	86 FR 24603 (May 7, 2021).
RefPlus Inc. (“RefPlus”)	86 FR 43633 (Aug. 10, 2021).	

The alternate test procedure granted in the CO₂ waivers and DOE’s proposal with respect to refrigeration systems utilizing CO₂ as a refrigerant are further discussed in section III.F.6 of this document.

As discussed in the June 2021 RFI, all CO₂ refrigerant waiver petitions DOE has thus far received address unit coolers. 86 FR 32332, 32346. However, it is possible that other CO₂ refrigeration system configurations may be relevant in the future, *e.g.* dedicated condensing units, matched pairs, or single-packaged dedicated systems. DOE reviewed product literature and other information for CO₂ systems having some of these alternative configurations. Most of the information identified by DOE pertains to manufacturers operating in Europe.

In the June 2021 RFI, DOE requested comment on the future expected use of walk-in refrigeration systems using CO₂. 86 FR 32332, 32346. Lennox, AHRI, National Refrigeration, and Hussmann stated that they are not aware of any transcritical ⁹ CO₂ dedicated condensing units available in North America. (Lennox, No. 9 at p. 7; AHRI, No. 11 at p. 12; National Refrigeration, No 17 at p. 1; Hussmann, No. 18 at p. 14) National Refrigeration asserted that CO₂ tends to be used in large, complex multi-compressor systems and therefore, would not be used in smaller systems

⁹ CO₂ refrigeration systems are transcritical because the high-temperature refrigerant that is cooled by ambient air is in a supercritical state, above the 87.8 °F critical point temperature, above which the refrigerant cannot exist as separate vapor and liquid phases.

with just one dedicated condensing unit (National Refrigeration, No. 17 at p. 1) The CA IOUs stated that CO₂ unit coolers cannot be tested and rated at the temperatures and pressures used in the current test procedure for more traditional hydrofluorocarbon (“HFC”) refrigerants; however, single-packaged dedicated CO₂ refrigeration systems should be able to use the test methods established in AHRI 1250–2020 for single-packaged dedicated systems, because these test methods do not use refrigerant flow or refrigerant conditions for energy calculations. (CA IOUs, No. 14 at p. 4) Additionally, the CA IOUs urged DOE to ensure that the WICF test procedures and metrics continue to provide consumers with the information necessary to easily compare the

performance of products with the same utility. *Id.*

DOE preliminarily finds that, in the North American market, CO₂ is primarily used in large rack systems, and that there do not appear to be any CO₂ dedicated condensing units available. Hence, DOE tentatively finds that adopting a test procedure for CO₂ dedicated condensing units is currently not warranted. However, DOE has also tentatively determined that the test methods in AHRI 1250–2020 for single-packaged dedicated systems do not need to be modified for CO₂ refrigerant as long as these units are tested using air enthalpy or calorimeter test methods, rather than a refrigerant enthalpy method. DOE further discusses its proposals for testing single-packaged dedicated systems in section III.G.2 of this document.

In this NOPR, DOE is proposing that walk-in refrigeration equipment utilizing CO₂ as a refrigerant meet the definition of a walk-in refrigeration system, but that the DOE test procedure, as proposed in this document, would apply only to (1) single-packaged dedicated systems and (2) unit cooler variants of CO₂ refrigeration systems. This proposal would exclude CO₂ dedicated condensing units from the proposed test procedure. The test procedures for CO₂ unit coolers and single-packaged refrigeration systems which use CO₂ as a refrigerant are outlined in more detail in sections III.F.6 and III.G.2.f of this document, respectively.

c. Multi-Circuit Single-Packaged Refrigeration Systems

DOE has received a request for waiver and interim waiver from Refrigerated Solutions Group (“RSG”) from the test procedure in subpart R, appendix C, for basic models of single-packaged dedicated systems having multiple refrigerant circuits within a single unit that share a single evaporator and a single condenser. (Docket EERE–2022–BT–WAV–0010, No. 1) In its petition, RSG stated that the current walk-in test procedure does not address multiple refrigeration circuits that are enclosed in a single unit. *Id.* Therefore, in this test procedure NOPR, DOE has initially determined that refrigeration systems with multiple refrigeration circuits that share a single evaporator and a single condenser and are used in walk-in applications meet the definition of “walk-in cooler and walk-in freezer.” Thus, DOE proposes to define “multi-circuit single-packaged dedicated system” in section III.A.2.e of this document. Additionally, DOE is

proposing a test procedure for such systems.

d. Ducted Units

DOE is aware that some walk-in evaporators and/or dedicated condensing units are sold with provisions to be installed with duct(s) to circulate air between the walk-in and the refrigeration system. The current definition of “single-packaged dedicated system” specifies that such systems do not have “any element external to the system imposing resistance to flow of the refrigerated air;” and the definition of “unit cooler” specifies that such equipment does not have “any element external to the cooler imposing air resistance.” (10 CFR 431.302) As such, unit coolers and single-packaged dedicated systems sold for ducted installation are not addressed by either definition—also, the current test procedure does not include provisions for setup of ductwork. While the definition for condensing unit does not exclude systems intended for ducted installation, the current test procedure does not include provisions for setup of ductwork for these components either.

DOE has granted waivers from the test procedure in subpart R, appendix C, to Air Innovations, Vinotheque, Cellar Pro, and Vinotemp, and an interim waiver to LRC Coil, for walk-ins marketed for use as wine cellar refrigeration systems (*see* Table III.2). The waivers are discussed in more detail in sections III.A.2.c and III.G.6 of this document. Relevant to the present discussion of scope, the specific basic models for which waivers have been granted include equipment sold as ducted units. As a result of the test procedure waivers granted by DOE, DOE proposes to revise the single-packaged dedicated system definition to clarify that such systems may have provisions for ducted installation. DOE proposes to add a definition for “ducted fan coil unit,” the ducted equivalent of a unit cooler. In doing so, DOE preserves the standard industry definition of a unit cooler while expanding the scope of the test procedure to ducted units. DOE also proposes to add provisions in the test procedures to address setup of ductwork and the external static pressure that it imposes on refrigeration system fans—all in order to improve representativeness of the test procedure. These test procedure revisions are addressed in section III.G.6 of this document.

TABLE III.2—INTERIM WAIVERS AND WAIVERS GRANTED TO MANUFACTURERS OF WALK-INS MARKETED AS WINE CELLAR REFRIGERATION SYSTEMS

Manufacturer	Interim waiver Federal Register citation	Waiver decision and order Federal Register citation
Air Innovations.	86 FR 2403 (Jan. 12, 2021).	86 FR 23702 (May 4, 2021).
Vinotheque.	86 FR 11961 (Mar. 1, 2021).	86 FR 26504 (May 14, 2021).
CellarPro.	86 FR 11972 (Mar. 1, 2021).	86 FR 26496 (May 14, 2021).
Vinotemp.	86 FR 23692 (May 4, 2021).	86 FR 36732 (July 13, 2021).
LRC Coil.	86 FR 47631 (Aug. 26, 2021).	

2. Definitions

a. Walk-in Cooler and Walk-in Freezer

The term “walk-in cooler and walk-in freezer” means an enclosed storage space refrigerated to temperatures, respectively, above, and at or below 32 °F, that can be walked into, and has a total chilled storage area of less than 3,000 square feet; however, the term does not include products designed and marketed exclusively for medical, scientific, or research purposes. 10 CFR 431.302. (*See also* 42 U.S.C. 6311(20))

In this notice, DOE proposes to amend the definition of walk-in cooler and freezer to specify that a walk-in may be comprised of doors, panels, and refrigeration systems. As explained in section I.B of this document, DOE established separate test procedures and energy conservation standards for the principal components that make up a walk-in: panels, doors, and refrigeration systems. 76 FR 21580, 21582 and 79 FR 32050, 32051–32052. DOE noted in a final rule published March 7, 2011 (“March 2011 Compliance, Certification, and Enforcement (“CCE”) final rule”) that the legislative design standards set forth in EPCA provide the framework for a component-based approach since each design standard is based on the performance of a given component of the walk-in. 76 FR 12422, 12444. In order to align the definition with the regulatory scheme adopted by DOE, DOE proposes to revise the definition to mean an enclosed storage space, including but not limited to panels, doors, and refrigeration systems, refrigerated to temperatures, respectively, above, and at or below 32

degrees Fahrenheit that can be walked into, and has a total chilled storage area of less than 3,000 square feet; however, the terms do not include products designed and marketed exclusively for medical, scientific, or research purposes. DOE does not intend for this amended definition to expand the scope of the definition for walk-in coolers and freezers nor does it intend for this amended definition to expand the certification and compliance responsibilities of entities involved in manufacturing or assembling walk-ins or walk-in components. Instead, DOE's proposed revision to the definition of walk-in cooler and walk-in freezer clarifies that DOE has the authority to separately regulate walk-in components as well as a full walk-in system (including but not limited to panels, doors, and refrigeration systems). The March 2011 CCE final rule adopted a definition for a walk-in manufacturer to specify the entities responsible for certification and/or compliance of walk-ins or walk-in components. 76 FR 12422, 12442–12444. DOE emphasizes that both the component manufacturer and the assembler bear the responsibility of standards compliance, even though the component manufacturer is the entity responsible for certification. An assembler may rely on the certification from the component manufacturer regarding whether the component being used is certified as compliant with DOE standards.

Issue 1: DOE requests comment on its proposed changes to the definition for walk-in cooler and walk-in freezer.

b. Doors

With respect to walk-ins, DOE defines a “door” as an assembly installed in an opening on an interior or exterior wall that is used to allow access or close off the opening and that is movable in a sliding, pivoting, hinged, or revolving manner of movement. For walk-in coolers and walk-in freezers, a door includes the door panel, glass, framing materials, door plug, mullion, and any other elements that form the door or part of its connection to the wall. 10 CFR 431.302. In the June 2021 RFI, DOE requested feedback on the current definition of “door.” 86 FR 32332, 32335.

Hussmann stated that the current definition of door is sufficient. (Hussmann, No. 18 at p. 3) Anthony and AHRI stated that “door” is unclear and inadequately defined. (Anthony, No. 8 at p. 1; AHRI, No. 11 at p. 2) AHRI commented that the current definition seems to describe an individual “door” opening, but that the requirement for testing uses the opening space in the

walk-in regardless of whether it contains more than one “door” opening. AHRI suggested that the definition of “door” should contain the door frame and all door components, and that DOE should differentiate between the number of openings for a specific door assembly inserted into the opening space, especially for display doors. (AHRI, No. 11 at pp. 2–3) Anthony asserted that any component that is part of the door assembly (*e.g.*, door, frame, wiring) is within the definition of a WICF door. (Anthony, No. 8 at pp. 1–2)

In the June 2021 RFI, DOE also requested comment specifically on the use of the term “door plug” within the definition of “door.” 86 FR 32332, 32335. Anthony and AHRI stated that they were unfamiliar with the term “door plug.” (Anthony, No. 8 at pp. 1–2; AHRI, No. 11 at pp. 2–3) Imperial Brown stated that the door plug is the moving part of the door that can swing or slide and comes attached to the frame. (Imperial Brown, No. 15 at p. 1) Hussmann stated that the term “door plug” is in reference to a regular door plug (*i.e.*, plugging heaters from a door to a frame system), and that Hussmann does not use the term “door plug” interchangeably with a “door.” (Hussmann, No. 18 at p. 3)

DOE recognizes that the current definition of “door” does not explicitly address that walk-in door assemblies may contain multiple door openings within one frame. DOE also notes that NFRC 100 includes several defined terms relating to door components (*e.g.*, door leaf), which differ from the terms used in DOE's definition of “door.” Additionally, certain stakeholders commented that they are unfamiliar with the term “door plug,” whereas others use it to describe different components of the door assembly.

DOE proposes to amend the definition of “door” to address doors with multiple openings within one frame; to include terminology that generally aligns with terminology used by the industry; and to remove use of the term “door plug,” which is being interpreted inconsistently by stakeholders. Specifically, DOE proposes to amend the definition of “door” to mean an assembly installed in an opening of an interior or exterior wall that is used to allow access or close off the opening and that is movable in a sliding, pivoting, hinged or revolving manner of movement. For walk-in coolers and walk-in freezers, a door includes the frame (including mullions), the door leaf or multiple door leaves (including glass) within the frame, and any other elements that form the assembly or part

of its connection to the wall. DOE also proposes to define the term “door leaf” to mean the pivoting, rolling, sliding, or swinging portion of a door. DOE tentatively concludes that the proposed revision of “door” and proposed definition of “door leaf” better align with industry terminology and address doors with multiple openings within one frame. DOE does not intend for the proposed changes to the definition of “door” and the newly defined term for “door leaf” to change the scope of applicability of the DOE test procedures or the applicability of standards for walk-in doors.

As discussed in the June 2021 RFI, DOE differentiates WICF doors by whether such doors are “display doors” or not display doors (*i.e.*, “passage doors” or “freight doors”). 86 FR 32332, 32335. A “freight door” is a door that is not a display door and is equal to or larger than 4 feet wide and 8 feet tall. 10 CFR 431.302. A “passage door” is a door that is not a freight or display door. *Id.* The use of dimensions in the definition of freight door conveys that these doors typically allow large machines (*e.g.*, forklifts) to pass through carrying freight. However, the definition does not address instances where one dimension exceeds the height or width requirement per the definition, but the other dimension is smaller than the other dimension requirement per the definition. In some cases, the surface area for such doors could be larger than 32 square feet, the area of a 4-foot by 8-foot door provided in the definition (*e.g.*, a door 5 feet wide and 7 feet tall, with a surface area of 35 square feet); in other cases, the surface area could be smaller than 32 square feet (*e.g.*, a door 5 feet wide and 6 feet tall, with a surface area of 30 square feet). As part of the June 2021 RFI, DOE reviewed the certified surface areas of freight and passage doors in DOE's Compliance Certification Management System (“CCMS”) Database. DOE found that many models certified as passage doors had rated surface areas greater than or equal to 32 square feet while some models certified as freight doors had rated surface areas less than 32 square feet. 86 FR 32332, 32335.

In the June 2021 RFI, DOE requested comment on whether height and width or surface area effectively distinguish between passage and freight doors and whether there are any building codes, standards, or industry practices to support or refute maintaining dimensions of a door as the defining characteristics separating freight and passage doors. Additionally, DOE sought comment on any other attributes other than size which would

appropriately distinguish passage and freight doors. Lastly, DOE sought comment on how to classify non-display doors with multiple openings where the individual door openings do not meet the definition of freight door, but the overall door assembly would meet the definition of a freight door per the dimension requirements in the freight door definition. *Id.*

The CA IOUs generally supported DOE updating its definitions related to walk-in doors to prevent mis-categorization. Specifically, the CA IOUs suggested that DOE align with industry definitions for freight doors, such as vertical or sectional overhead doors, and consider differentiating doors based on opening characteristics (e.g., swing, horizontal slide, vertical slide, rollup) rather than size. (CA IOUs, No. 14 at p. 5)

Imperial Brown stated that the door width-in-clear¹⁰ (or “WIC”) should be the determining factor for distinguishing passage and freight doors. Imperial Brown recommended that a freight door be identified as a door with a WIC of 48 inches or more and a height-in-clear¹¹ (“HIC”) of 78 inches or more, allowing for pallet and forklift traffic. (Imperial Brown, No. 15 at p. 1)

AHRI stated that the current area cut-off of 4 feet by 8 feet is sufficient for distinguishing between passage and freight doors. AHRI stated that there are no specific dimensions that distinguish freight from passage doors and that the dimensions tend to be application specific. AHRI also commented that generally the height of passage and freight doors are similar, but that the width varies. (AHRI, No. 11 at p. 3)

Regarding other characteristics that may distinguish passage and freight doors, both Anthony and Hussmann stated that they define passage doors and freight doors by whether the door is provided for personnel access to the WICF (*i.e.*, passage doors) or provided for stocking of product with the use of equipment (*i.e.*, freight doors). (Anthony, No. 8 at p. 2; Hussmann, No. 18 at pp. 3–4) Hussmann stated that passage doors must be large enough for individuals to pass through and meet requirements established by the Americans with Disabilities Act (“ADA”). (Hussmann, No. 18 at pp. 3–4)

Regarding non-display doors that contain multiple openings, AHRI and Hussmann commented that it is not

necessary to change how non-display doors with multiple openings are classified. (AHRI, No. 11 at p. 3; Hussmann, No. 10 at p. 4) Imperial Brown stated that non-display doors with multiple openings should be considered freight doors only if they have an unobstructed WIC by HIC (*i.e.*, there are no mullions in the opening) that meets the freight door dimensional requirements. (Imperial Brown, No. 15 at p. 1)

Considering the comments received, DOE is not proposing to revise the definition of “freight door” at this time.

DOE is proposing to define the term “non-display door.” Although the test procedures outlined in 10 CFR 431.304 and appendices A and B use the term “non-display door,” it is not currently defined. The proposed definition would provide that a “non-display door” would mean a door that is not a display door.

Based on the input it has received, DOE has tentatively determined that differentiating walk-in doors based on opening characteristics would better align with industry terminology. Therefore, DOE is proposing to define three terms, which include some industry terminology identified in NFRC 100, to further differentiate among both display and non-display doors: “Hinged vertical door,” “roll-up door,” and “sliding door” (see proposed definitions set out in the regulatory text at the end of the document, proposed § 431.302).

Issue 2: DOE requests feedback on the proposed changes to the definition of “door” and the newly proposed definition for “door leaf.” DOE also seeks comment on the newly proposed definitions for certain door opening characteristics: “Hinged vertical door,” “roll-up door,” and “sliding door.”

c. High-Temperature Refrigeration Systems

As discussed previously, DOE has granted several manufacturers waivers and interim waivers from the test procedure in subpart R, appendix C, for basic models of refrigeration systems marketed as wine cellar refrigeration systems (*see* section III.A.1.d). These manufacturers stated that walk-ins used for wine storage are intended to operate at a temperature range of 45 to 65 °F and 50–70 percent relative humidity, rather than the 35 °F and less than 50 percent relative humidity test condition prescribed in subpart R, appendix C.

In the June 2021 RFI, DOE requested comment on how refrigeration systems marketed as wine cellar refrigeration systems should be defined to best represent the conditions under which

these systems are designed to operate. 86 FR 32332, 32334–32335. AHRI, Lennox, and the CA IOUs recommended that DOE adequately define refrigeration systems marketed as wine cellar refrigeration systems and evaluate them as a separate efficiency class. (Lennox, No. 9 at p. 6; AHRI, No. 11 at p. 11; CA IOUs, No. 14 at pp. 3–4) AHRI and Hussmann suggested that refrigeration systems marketed as wine cellar refrigeration systems be defined as an enclosed storage space designed to be cooled to between 45 °F and 65 °F with a relative humidity range of 50 percent to 70 percent, and typically kept at 55 °F and 55% RH. (AHRI, No. 11 at p. 2; Hussmann, No. 18 at p. 3) Daikin stated that refrigeration systems marketed as wine cellar refrigeration systems operate between 37.4 °F and 68 °F, and between 70% and 85% relative humidity. (Daikin, No. 17 at p. 2)

In the June 2021 RFI, DOE also requested feedback on walk-in applications other than wine cellar cooling that may have a target room temperature of 35 °F and higher. 86 FR 32332, 32334–32335. Lennox, AHRI and Hussmann each stated that wine cellars are the only walk-in applications with a temperature range between 45 °F and 65 °F and with a relative humidity between 50 percent and 70 percent. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 2; Hussmann, No. 18 at pp. 2–3) Daikin stated by way of example that florist coolers operate at 68 °F and between 90% to 95% humidity. (Daikin, No. 17 at p. 2)

DOE understands from these comments that there are walk-in applications other than wine cellars that require cooling to temperatures higher than 35 °F. To provide for testing of such walk-ins using test conditions that result in measurements of energy use in a representative average-use cycle DOE proposes to define walk-ins designed to operate at cooling temperatures above 45 °F as employing a “high-temperature refrigeration system”—which would mean a walk-in refrigeration system which is not designed to operate below 45 °F.” The proposed definition would provide for the testing of such units using specified conditions representative of their average use, *i.e.*, cooling the refrigerated space to a temperature above 45 °F. See the corresponding test procedure provisions proposed in section III.G.6 for further details.

d. Ducted Fan Coil Units

DOE has granted waivers to Air Innovations, Vinotheque, Cellar Pro, and Vinotemp, and an interim waiver to LRC Coil for walk-ins that are marketed

¹⁰ Imperial Brown defined WIC as the clear opening width, typically from left frame jamb to right frame jamb. (Imperial Brown, No. 15 at p. 1)

¹¹ Imperial Brown defined HIC as the clear opening height, typically from door sill to frame header. (Imperial Brown, No. 15 at p. 1)

as wine cellar refrigeration systems that are designed and marketed as ducted units. (See Table III.2) The definitions for single-packaged units and unit coolers currently exclude ducted units, resulting in the lack of a test procedure for such units. 10 CFR 431.302.

Specifically, the current single-packaged unit definition excludes units with “any element external to the system imposing resistance to flow of the refrigerated air.” Similarly, the current unit cooler definition specifically excludes units with “element[s] external to the cooler imposing air resistance.” *Id.*

In the June 2021 RFI, DOE requested comment on changing the “single-packaged dedicated system” and “unit cooler” definitions to address units that are designed to be installed with ducts. 86 FR 32332, 32346. Lennox and AHRI both stated that the ASHRAE 210P committee¹² is working to define a “ducted unit cooler” and is currently considering defining it as “an assembly, including means for forced air circulation, capable of moving air against both internal and non-zero external flow resistance, and elements by which heat is transferred from air to refrigerant to cool the air, with provision for ducted installation.” (Lennox, No. 9 at p. 6; AHRI, No. 11 at p. 11) Lennox and AHRI both urged DOE to work with the ASHRAE 210P committee to find an appropriate solution. (Lennox, No. 9 at p. 7; AHRI, No. 11 at p. 12)

To clarify that refrigeration systems that have provision for ducted installation are indeed included in the DOE test procedure, DOE is proposing an appropriate term and a definition for the term “ducted unit cooler” mentioned by commenters and is also proposing to revise the definition for single-packaged dedicated system to clarify that such a system can have provision for ducted installation. DOE proposes to adopt the new term, “ducted fan-coil unit,” which would be defined as an assembly including means for forced air circulation capable of moving air against both internal and non-zero external flow resistance, and elements by which heat is transferred from air to refrigerant to cool the air, with provision for ducted installation. DOE is also proposing to revise the current single-packaged dedicated system definition to mean a refrigeration system (as defined in 10 CFR 431.302)

that is a single-packaged assembly that includes one or more compressors, a condenser, a means for forced circulation of refrigerated air, and elements by which heat is transferred from air to refrigerant.

Issue 3: DOE requests comment on the proposed definition of “ducted fan coil unit” and on the proposed modification to the “single-packaged dedicated system” definition.

e. Multi-Circuit Single-Packaged Refrigeration Systems

As discussed in section III.A.1.c, DOE is proposing to include a test procedure for evaluating the energy consumption of single-packaged units that contain multiple refrigeration circuits. As discussed, these units differ from larger multi-circuit refrigeration systems in that the refrigeration circuits are housed within an assembly and share a single condenser and a single evaporator. DOE proposes to define a “multi-circuit single-packaged refrigeration system” as a single-packaged dedicated system (as defined in 10 CFR 431.302) that contains two or more refrigeration circuits that refrigerate a single stream of circulated air.

Issue 4: DOE requests comment on the proposed definition for multi-circuit single-packaged dedicated refrigeration systems.

f. Attached Split Systems

DOE is aware of some refrigeration systems that are sold as matched pairs in which the dedicated condensing unit and unit cooler are permanently attached to each other with structural beams. When these units are mounted to the refrigerated box, these beams extend through the wall of the walk-in, connecting the unit cooler inside the refrigerated box with the dedicated condensing unit outside the refrigerated box. The functionality of an attached split system may be similar to that of a matched pair system but may also have similarities to a single-packaged dedicated system, since they are single assemblies. The DOE test procedure does not currently define such systems, nor does it provide any unique test provisions for them—thereby affecting the ability of manufacturers to provide test results reflecting the energy efficiency of this equipment during a representative average use cycle. DOE discusses its proposal for testing such units in section III.G.4 of this document. DOE has initially determined that attached split systems are a type of matched pair system and proposes to define these systems as matched pair refrigeration systems designed to be installed with the evaporator entirely

inside the walk-in enclosure and the condenser entirely outside the walk-in enclosure, and the evaporator and condenser are permanently connected with structural members extending through the walk-in wall.

Issue 5: DOE requests comment on the proposed definition for attached split system.

g. Detachable Single-Packaged System

DOE is aware of some refrigeration systems that are designed to be installed with the evaporator unit exchanging air through the wall or ceiling of the walk-in as would be the case in a single-packaged system, but with the condensing unit installed either next to the evaporator unit or installed remotely and connected to the evaporator with refrigerant lines as is done in split systems. The current DOE test procedure does not define such systems or provide testing provisions specific to this configuration. DOE discusses its proposal for testing such units in section III.G.3 of this document. DOE has initially determined that these units are a type of single-packaged dedicated system, and proposes to define a detachable single-packaged system as a system consisting of a dedicated condensing unit and an insulated evaporator section in which the evaporator section is designed to be installed external to the walk-in enclosure and circulating air through the enclosure wall, and the condensing unit is designed to be installed either attached to the evaporator section or mounted remotely with a set of refrigerant lines connecting the two components.

Issue 6: DOE requests comment on the proposed definition for detachable single-packaged dedicated system.

h. CO₂ Unit Coolers

As discussed in section III.A.1.b, DOE is proposing to adopt test procedures for unit coolers designed for use in CO₂ refrigeration systems, these proposals are discussed in detail in section III.F.6 of this document. CO₂ systems are designed and built to operate using CO₂ as a refrigerant, which has the potential to reach pressures much higher than conventional refrigerants. With the air enthalpy test method, CO₂ single-packaged refrigeration systems would use the same test methods as conventional-refrigerant single-packaged dedicated systems (see DOE’s proposal discussed in section III.G.2.f). However, the proposed test procedure for CO₂ unit coolers would alter the inlet refrigerant test conditions as compared to conventional refrigerants (see section III.F.6). To clarify the scope

¹² The American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) has formed the ASHRAE Standard Project Committee 210 (“ASHRAE 210P”) to evaluate and revise its “Method of Testing and Rating Commercial Walk-in Refrigerators and Freezers.” See spc210.ashraeps.org/.

of the proposed unit cooler test procedure, DOE is proposing to define a CO₂ unit cooler as one that includes a nameplate listing only CO₂ as an approved refrigerant.

Issue 7: DOE requests comment on the proposed definition of CO₂ unit coolers. DOE also requests comment on whether any distinguishing features of CO₂ unit coolers exist that could reliably be used as an alternative approach that can differentiate them from those unit coolers intended for use with conventional refrigerants.

i. Hot Gas Defrost

As discussed previously, DOE published a final rule that amended the test procedure to rate hot gas defrost unit coolers using the modified default values for energy use and heat load contributions in AHRI 1250–2020. 86 FR 16027. At that time, DOE did not adopt a definition for “hot gas defrost.” However, as discussed in more detail in section III.G.8.b, DOE is proposing that equipment with hot gas defrost installed at the factory may be marketed using representations of performance with hot gas defrost activated. This would be a voluntary representation by the manufacturer. To ensure that the scope of this voluntary representation is clear, DOE is proposing to define “hot gas defrost” as a factory-installed system where refrigerant is used to transfer heat from ambient outside air, the compressor, and/or a thermal storage component that stores heat when the compressor is running and uses this stored heat to defrost the evaporator coils.

Issue 8: DOE requests comment on the proposed definition for hot gas defrost. Specifically, DOE requests comment on if this proposed definition is sufficient to identify which equipment is sold with hot gas defrost capability installed and which is not.

B. Industry Standards

The current DOE test procedure for walk-in coolers and freezers incorporates the following industry test standards: NFRC 100–2010 into appendix A; ASTM C518 into appendix B; and AHRI 1250–2009, AHRI 420–2008,¹³ and ASHRAE 23.1–2010¹⁴ into subpart R, appendix C. The following sections detail the industry standards

DOE is proposing to incorporate by reference in the NOPR and the relevant provisions of those industry standards that DOE is proposing to adopt.

1. Standards for Determining Thermal Transmittance (U-Factor)

Appendix A references NFRC 100 as the method for determining the U-factor of doors and display panels. NFRC 100 allows for computational determination of U-factor by simulating U-factor using Lawrence Berkeley National Lab’s (“LBNL”) WINDOW and THERM software, provided that the simulated value for the baseline product in a product line is validated with a physical test of that baseline product and the simulated value is within the accepted agreement with the physical test value as specified in section 4.7.1 of NFRC 100.¹⁵ Section 4.3.2.1 of NFRC 100 references NFRC 102–2010, “Procedure for Measuring the Steady state Thermal Transmittance of Fenestration Systems” (“NFRC 102–2010”), as the physical test procedure for determining U-factor. NFRC 102–2010 is based on ASTM C1199–09, “Standard Test Method for Measuring the Steady state Thermal Transmittance of Fenestration Systems Using Hot Box Methods” (“ASTM C1199–09”) with some modifications.

Since DOE adopted this test procedure for determining U-factor of doors and display panels in 2011, NFRC has published updates to NFRC 102, the most recent being NFRC 102–2020, which supersedes all previous versions of NFRC 102. The following are the identified substantive changes and additions in NFRC 102–2020 as compared to NFRC 102–2010, which is referenced in the current Federal test procedure via NFRC 100–2010:

1. Added a list of required calibrations for primary measurement equipment, including metering box wall transducer and surround panel flanking loss characterization and annual verification procedure, and incorporated a calibration transfer standard (“CTS”) calibration continuous characterization procedure; and

2. The provisions regarding air velocity distribution were revised to be more specific to the type of fans used.

Additionally, NFRC 102–2020 references the updated version of ASTM

C1199 (ASTM C1199–14) instead of ASTM C1199–09. Based on a review of ASTM C1199–14, DOE has tentatively determined that the differences between editions are editorial.

DOE is proposing to adopt by reference in appendix A, the following sections of NFRC 102–2020 for determining U-factor:

- 2. Referenced Documents,
- 3. Terminology,
- 5. Apparatus,
- 6. Calibration,
- 7. Experimental Procedure (excluding 7.3. Test Conditions),
- 8. Calculation of Thermal Transmittance,
- 9. Calculation of Standardized Thermal Transmittance,
- Annex A1. Calibration Transfer Standard Design,
- Annex A2. Radiation Heat Transfer Calculation Procedure, and
- Annex A4. Garage Panel and Rolling Door Installation.

DOE is also proposing to incorporate by reference ASTM C1199–14, as it is referenced in NFRC 102–2020. Specifically, in the proposed test procedure in appendix A, DOE is proposing to reference the following sections of ASTM C1199–14 as referenced through NFRC 102–2020: Sections 2, 3, 5, 6, 7 (excluding 7.3), 8, 9, and Annexes A1 and A2. DOE is not proposing to reference any other sections of NFRC 102–2020 or ASTM C1199–14 as they either do not apply or they are in direct conflict with other test procedure provisions included in the subpart R.

2. Standard for Determining R-Value

As mentioned previously, section 4.2 of appendix B references ASTM C518 to determine the thermal conductivity, or K-factor, of panel insulation. EPCA requires that the measurement of the K-factor used to calculate the R-value be based on ASTM C518–2004 (“ASTM C518–04”). (42 U.S.C. 6314(a)(9)(A)(ii)) In December 2015, ASTM published a revision of this standard (“ASTM C518–15”). ASTM C518–15 removed references to ASTM Standard C1363, “Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus” (“ASTM C1363”), and added references to ASTM Standard E456, “Terminology Relating to Quality and Statistics.” Additionally, ASTM C518–15 relies solely on the International System of Units (“SI units”), with paragraph 1.13 clarifying that these SI unit values are to be regarded as standard. In July 2017, ASTM published another revision of ASTM C518 (“ASTM C518–17”). ASTM

¹³ AHRI 420–2008, “Performance Rating of Forced-Circulation Free-Delivery Unit Coolers for Refrigeration” (“AHRI 420–2008”).

¹⁴ ANSI/ASHRAE 23.1–2010, “Methods of Testing for Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units that Operate at Subcritical Temperatures of the Refrigerant” (“ASHRAE 23.1–2010”).

¹⁵ Section 4.7.1 of NFRC 100 requires that the accepted difference between the tested U-factor and the simulated U-factor be (a) 0.03 Btu/(h·ft²·°F) for simulated U-factors that are 0.3 Btu/(h·ft²·°F) or less, or (b) 10 percent of the simulated U-factor for simulated U-factors greater than 0.3 Btu/(h·ft²·°F). This agreement must match for the baseline product in a product line. Per NFRC 100, the baseline product is the individual product selected for validation; it is not synonymous with “basic model” as defined in 10 CFR 431.302.

C518–17 added a summary of precision statistics from an interlaboratory study from 2002–2004 in section 10 “Precision and Bias.”

As part of the June 2021 RFI, DOE requested comment on what issues, if any, would be present if DOE were to adopt the most current version of the standard, ASTM C518–17, for measuring panel K-factor. 86 FR 32332, 32336. NFRC stated that the updates to ASTM C518–17 as compared to what is in ASTM C518–04 would have no substantial impact on the results of testing and no impact on test burden. NFRC also stated that adopting ASTM C518–17 would bring DOE test procedures in line with current industry methods and practice. (NFRC, No. 10 at p. 2) DOE did not receive any additional comments on potentially adopting ASTM C518–17 for measuring panel K-factor.

DOE has tentatively determined that the updates to ASTM C518–2004 (the version of the industry test procedure specified by EPCA as the basis for calculating the K-factor) made in 2015 and 2017 do not substantively change the test method nor would adoption of the latest version in the DOE test procedure increase test burden. Therefore, DOE is proposing to amend its test procedure for determining R-value of insulation for non-display doors and panels by incorporating by reference ASTM C518–17. Specifically, in the proposed test procedure in appendix B, DOE is proposing to reference the following sections of ASTM C518–17:

- 2. Referenced Documents,
- 3. Terminology,
- 5. Apparatus,
- 6. Calibration,
- 7. Test Procedures (excluding 7.3. Specimen Conditioning),
- 8. Calculation, and
- Annex A1. Equipment Design.

DOE is not proposing to reference any other sections of ASTM C518–17 as they either do not apply or they are in direct conflict with other test procedure provisions included in subpart R. As ASTM C518–17 is an updated version of ASTM C518–2004, the DOE test procedure for determining the K-value remains based on ASTM C518–2004.

3. Standards for Determining AWEF

DOE’s current test procedure for WICF refrigeration systems is codified in appendix C to subpart R of part 431 and incorporates by reference AHRI 1250–2009, AHRI 420–2008, and ASHRAE 23.1–2010. AHRI 1250–2009 is the industry test standard for refrigeration systems for walk-in coolers and freezers, including unit coolers and

dedicated condensing units sold separately, as well as matched pairs. 81 FR 95758, 95798.¹⁶ The procedure describes the method for measuring the refrigeration capacity and the electrical energy consumption for a condensing unit and a unit cooler, including off-cycle fan and defrost subsystem contributions. Using the refrigeration capacity and electrical energy consumption, AHRI 1250–2009 provides a calculation methodology to compute AWEF, the applicable energy-performance metric for refrigeration systems.

The DOE test procedure for walk-in refrigeration systems adopts by reference the test procedure in AHRI 1250–2009 (excluding Tables 15 and 16), with certain enumerated modifications. Generally, DOE’s modifications to AHRI 1250–2009 address specific test conditions, tolerances, and instrumentation requirements, as well as specific instructions for how to address defrost energy use, unit coolers tested alone, and dedicated condensing units tested alone. See appendix C to subpart R of part 431.

In 2014, AHRI published an update to AHRI Standard 1250 (“AHRI 1250–2014”) which supersedes AHRI 1250–2009. After publication of AHRI 1250–2014, DOE and other stakeholders supported the AHRI 1250 committee in its update of AHRI Standard 1250. Subsequently, in April 2020, AHRI published AHRI 1250–2020, which supersedes AHRI 1250–2014. AHRI 1250–2020 incorporates many of the modifications and additions to AHRI 1250–2009 that DOE currently prescribes in its test procedure. It also includes test methods for unit coolers and dedicated condensing units tested alone, rather than incorporating by reference updated versions of AHRI 420–2008 and/or ASHRAE 23.1–2010, and also includes test methods for single-packaged dedicated systems. Sections III.B.3.a to III.B.3.d detail the changes made to AHRI 1250–2020 as compared to AHRI 1250–2009.

In the June 2021 RFI, DOE requested comment on what issues, if any, would be present if DOE were to adopt AHRI 1250–2020 into the DOE test procedure. 86 FR 32332, 32336. The CA IOUs and NEEA stated their general support for the adoption of AHRI 1250–2020. (CA IOUs, No. 14 at p. 1; NEEA, No. 16 at pp. 1–2) Lennox, AHRI, and Hussmann

supported the adoption of AHRI 1250–2020 with some reservations associated with the retest burden it may create. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 4; Hussmann, No. 18 at p. 6) Lennox, AHRI, and Hussmann asked DOE to evaluate if a full revision of the test standards was appropriate at this time. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 4; Hussmann, No. 18 at p. 6) DOE acknowledges the potential burden of a new test procedure and notes that a full cost evaluation of the proposed test procedure changes has been conducted and is discussed in section III.J. Therefore, DOE is proposing two sets of changes for the refrigeration system test procedure. One set of changes would be included as proposed revisions to subpart R, appendix C, and the other group would be proposed through the establishment of an appendix C1. DOE has tentatively determined that the changes to subpart R, appendix C, would not affect AWEF ratings and therefore not require retesting or recertification. These proposed changes, if adopted, would be required 180 days after the test procedure final rule is published. DOE has also tentatively determined that the proposed provisions included in appendix C1 would affect the determination of energy use and would therefore require retesting and recertification of the proposed AWEF2. The provisions proposed in appendix C1, if adopted, would be required to be followed in conjunction with the compliance date of any amended energy conservation standards that DOE may end up adopting as part of a separate standards rulemaking.

In this test procedure NOPR DOE is proposing to reference AHRI 1250–2020 for use in appendix C1, but excluding:

- Section 1 Purpose,
- Section 2 Scope,
- Section 9 Minimum Data Requirements for Published Ratings,
- Section 10 Marking and Nameplate Data,
- Section 11 Conformance Conditions, and
- Section C10.2.1.1 Test Room Conditioning Equipment under section C10—Defrost Calculation and Test Methods.

DOE is not proposing to reference these sections of AHRI 1250–2020 since they either do not apply or conflict with other test procedure provisions included in the proposed appendix C1. Additionally, DOE is not proposing to reference ASHRAE 23.1–2010 or AHRI 420–2008 in the proposed appendix C1, as the materials referenced in these standards by AHRI 1250–2009 are now included within AHRI 1250–2020.

¹⁶ Available at www.ahrinet.org. AHRI 1250–2009 incorporates by reference AHRI 420–2008 for testing of unit coolers and ASHRAE 23–2005 for testing of dedicated condensing units. DOE has updated the reference for the latter test standard to ASHRAE 23.1–2010.

Further, DOE is proposing to reference ASHRAE 16–2016 in the proposed appendix C1, as it is referenced in AHRI 1250–2020, but excluding:

- Section 1 Purpose
- Section 2 Scope
- Section 4 Classifications
- Normative Appendices E–M
- Informative Appendices N–R

DOE is not proposing to reference these sections of ASHRAE 16–2016 as they either do not apply or conflict with other test procedure provisions that would be included as part of the newly proposed appendix C1.

Similarly, DOE is proposing to reference ASHRAE 37–2009 in the proposed appendix C1, as it is referenced in AHRI 1250–2020, but excluding:

- Section 1 Purpose,
- Section 2 Scope,
- Section 4 Classifications,
- Informative appendix A

Classifications of Unitary Air-conditioners and Heat Pumps.

DOE is not proposing to reference these sections of ASHRAE 37–2009 as they either do not apply or conflict with other test procedure provisions that would be included as part of the newly proposed appendix C1.

a. Changes Consistent With Subpart R, Appendix C

As mentioned previously, AHRI 1250–2020 incorporates many of the modifications and additions to AHRI 1250–2009 that DOE currently prescribes in its test procedure. The modifications in the following sections of subpart R, appendix C, were incorporated into AHRI 1250–2020. Thus, if DOE were to adopt AHRI 1250–2020, DOE would remove the following sections from subpart R, appendix C:

- Section 3.1.1, which modifies Table 1 (Instrumentation Accuracy) in AHRI 1250–2009;
- Section 3.1.2, which provides guidance on electrical power frequency tolerances;
- Section 3.1.3, which states that in Table 2 of AHRI 1250–2009, the test operating tolerances and test condition tolerances for air leaving temperatures shall be deleted;
- Section 3.1.4, which states that in Tables 2 through 14 in AHRI–1250–2009, the test condition outdoor wet bulb temperature requirement and its associated tolerance apply only to units with evaporative cooling;
- Section 3.1.5, which provides tables to use in place of AHRI 1250–2009 Tables 15 and 16, which are excluded from the IBR in 10 CFR 431.303. The update in AHRI 1250–2020 to Tables 15

and 16 would allow DOE to incorporate the AHRI 1250–2020 tables by reference if DOE were to adopt AHRI 1250–2020;

- Section 3.2.1, which provides specific guidance on how to measure refrigerant temperature;
- Section 3.2.2, which removes the requirement to perform a refrigerant composition and oil concentration analysis;
- Section 3.2.4, which provides voltage requirements for unit cooler fan power measurements;
- Section 3.2.5, which provides insulation and configuration requirements for liquid and suction lines used for testing;
- Section 3.3.1, which gives direction for how to test and rate unit coolers tested alone;
- Section 3.3.2, which clarifies that the 2008 version of AHRI Standard 420 should be used for unit coolers tested alone;
- Section 3.3.3, which modifies the allowable reduction in fan speed for off-cycle evaporator testing;
- Section 3.4.1, which specifies that the 2010 version of ASHRAE 23.1 should be used and that “suction A” condition test points should be used when testing dedicated condensing units and,
- Section 3.5, which provides guidance on how to rate refrigeration systems with hot gas defrost.

The entirety of section 3.4.2 of subpart R, appendix C, which provides instruction on how to calculate AWEF and net capacity for dedicated condensing units, would also be removed if AHRI 1250–2020 were to be adopted, but the text in AHRI 1250–2020 that would replace it alters the text currently in section 3.4.2, which would result in a change to the current test procedure.

b. CFR Language Not Adopted in AHRI 1250–2020

As mentioned previously, AHRI 1250–2020 incorporates many, but not all, of the modifications and additions to AHRI 1250–2009 that DOE currently prescribes in its test procedure. For example, section 3.2.3, which modifies the requirements in Section C3.4.5 of AHRI 1250–2009 to require only a sight glass and a temperature sensor located on the tube surface under the insulation to verify sub-cooling downstream of mass flow meters, was not incorporated into AHRI 1250–2020. DOE is proposing, however, to carry over this section into the newly proposed appendix C1.

With respect to other current sections in subpart R, appendix C, sections that were not adopted by AHRI 1250–2020,

DOE is proposing to revise those sections as part of this NOPR in the following manner:

- Sections 3.3.4 and 3.3.5, which modify the defrost test procedure in AHRI 1250–2009, would not be carried over into the newly proposed appendix C1. This NOPR proposes a revised approach to account for defrost heat load and energy use. This topic and DOE’s proposals are discussed in sections III.G.8.a and III.G.8.b; and
- Section 3.3.7, which provides guidance on how to rate refrigeration systems with variable-speed evaporator fans would also not be carried over into the newly proposed appendix C1.

c. Changes That May Impact the Determination of AWEF

Several changes in AHRI 1250–2020 may impact the AWEF calculation. These changes can be grouped into five categories, discussed in the following paragraphs: Off-cycle tests, single-packaged dedicated systems, defrost calculations, variable capacity, and unit coolers.

Off-Cycle Tests

AHRI 1250–2020 updated the off-cycle tests in Sections C3.5 and C4.2 such that the total input wattage of the test unit is measured during the off cycle, rather than just the unit cooler fan input wattage. This change accounts for ancillary power from components such as crank case heaters and would deliver more representative off-cycle power results. As a result, if DOE were to incorporate this provision into its test procedure, it would affect the AWEF measurement for dedicated condensing units, matched pairs, and single-packaged dedicated systems by accounting for additional energy usage in the measured off-cycle power consumption value. In addition, updates made in AHRI 1250–2020 require that the measurement of unit cooler off-cycle power include the total electric power input to pan heaters and controls as well as the fan motors. AHRI 1250–2020 requires that off-cycle fan speed be at least 50% of full speed or that duty cycle for cycling fans be at least 50%, consistent with the current requirements of section 3.3.3 of subpart appendix C.

Single-Packaged Units

AHRI 1250–2020 added Section C9.1, which includes test methods for single-packaged refrigeration units. These methods allow for testing of single-packaged units with indoor and outdoor air enthalpy methods as specified in ASHRAE 37 and ASHRAE 16. These methods account for the heat leakage

that single-packaged dedicated systems are prone to experience by design. The inclusion of this heat leakage would lower single-packaged dedicated systems' net capacities and therefore lower their AWEFs. It would also make their net capacities more representative of field performance.

Defrost Calculations

AHRI 1250–2020 combined the defrost calculations and test methods into Section C10 to AHRI 1250–2020. For systems using electric defrost, the defrost calculations for defrost heat contributed to the box load (Q_{DF}) have been changed to three different equations depending on the system's gross capacity. In addition, new calculation methods for estimating the defrost energy of units with hot gas defrost have been added. The new default equations for electric and hot gas defrost heat and energy contributions are based on testing and analysis work conducted by AHRI and DOE, and therefore these values are expected to be more representative than previous equations for the default values.

AHRI 1250–2020 also added two optional challenge¹⁷ tests for adaptive and hot gas defrost in appendices E and F, respectively. Both tests evaluate whether a unit has a system that functions as either an adaptive or hot gas defrost system. For compliance purposes, DOE requires that units are tested without activating adaptive defrost or hot gas defrost; therefore, neither challenge test included in AHRI 1250–2020 would affect the calculation of AWEF. The defrost challenge tests and calculations are discussed in detail in sections III.G.8.a, and III.G.8.b of this document.

d. Additional Amendments

In addition to those changes enumerated in sections III.B.3.a through III.B.3.c of this document, AHRI 1250–2020 includes additional amendments that are inconsistent with the current DOE test procedure and would not be expected to impact calculated AWEF. This section discusses those changes.

AHRI 1250–2020 added exclusions for liquid-cooled condensing systems in section 2.2.4, and excludes systems that use carbon dioxide, glycol, or ammonia as refrigerants in section 2.2.5. The current DOE test procedure is neutral

with respect to refrigerant, and DOE considers all walk-in refrigeration systems to be covered equipment regardless of the refrigerant used. However, DOE recognizes that modifications may be necessary to the test method for different refrigerants (for example, see discussion in section III.F.6 for CO₂).

As discussed in section III.B.3.a, AHRI 1250–2020 updated many of the tolerances in Table 2 of section 4. Some of these updates are not included in the current CFR language. DOE proposes to adopt the tolerances in AHRI 1250–2020, Table 2 of section 4 in subpart R, appendix C. As discussed later, DOE expects that the updated tolerance values would improve the repeatability of the test procedure with no impact on test cost.

AHRI 1250–2020 includes an updated list of references and the applicable versions of certain test standards in appendix A, "References—Normative." DOE proposes to reference AHRI 1250–2020 appendix A in subpart R, appendix C. DOE expects that this modification would have no impact on test cost, while ensuring that more recent test standards are referenced.

Both AHRI 1250–2009 appendix C and AHRI 1250–2020 appendix C provide specific test methods for testing walk-in cooler and freezer systems, whereas the body of the standard specifies test requirements and calculations for walk-in box load and for determining AWEF. Additionally, AHRI 1250–2020 includes the following updated provisions: Section C3 of AHRI 1250–2009 lists requirements for measuring temperature (Section C3.1), measuring pressure (Section C3.2), measuring refrigerant properties (Section C3.3), determining refrigerant flow (Section C3.4), determining unit cooler fan power (Section C3.5), and specifies measurement and recording intervals (Section C3.6). In AHRI 1250–2020, Section C3 has been expanded to include requirements for measuring off-cycle power (Section C3.5) and determining steady state refrigeration capacity and energy consumption (Section C3.6), which are applicable to all tests unless otherwise specified. Aside from single-packaged dedicated system tests and the off-cycle power tests discussed in the previous section and in Sections III.G.2 and III.G.1, respectively, of this document, DOE does not expect that the revisions made to Section C3 in AHRI 1250–2020 would impact test duration and is therefore proposing to incorporate these sections

(except for Section C3.5)¹⁸ into subpart R, appendix C.

Sections C3.1.3.1, C3.1.3.2, and C3.1.3.3 of AHRI 1250–2020 specified refrigerant temperature measurement locations for unit coolers tested alone, matched pairs, and dedicated condensing systems tested alone. Specific changes include:

- For unit coolers tested alone: Refrigerant entering temperature is measured within six pipe diameters upstream of the control device (Section C3.1.3.1).
- For matched pairs, but not single-packaged dedicated systems: Refrigerant entering temperature is measured within the first six inches of the refrigerant pipe entering the unit cooler conditioned space, and the leaving temperature is measured within the last six inches of the refrigerant pipe leaving the unit cooler conditioned space (Section C3.1.3.2); and
- For dedicated condensing units tested alone: Entering and leaving refrigerant temperatures are measured at the inlet and outlet of the unit using two independent measuring systems (Section C3.1.3.3).

The modifications for measuring refrigerant temperature in AHRI 1250–2020 are expected to improve the repeatability and reproducibility of the test procedure, but do not impact test setup or test duration; therefore, DOE is proposing to reference these sections in subpart R, appendix C.

AHRI 1250–2020 added Section C7.5.1.1 to provide more detailed instructions for calculating system capacity beginning with measured temperatures instead of calculated enthalpies, which is what was done in AHRI 1250–2009. Section C7.5.1 also includes the determination of enthalpy from capacity test results.

AHRI 1250–2020 added Section C9.2, which specifies an allowable heat balance of ± 6 percent for single-packaged refrigeration capacity testing. AHRI 1250–2009 required a heat balance of ± 5 percent for all systems. This change was made to align with ASHRAE 37, which AHRI 1250–2020 incorporates by reference for single-packaged testing.

AHRI 1250–2009 included Section C12 "Method of Testing Condensing Units for Walk-In Cooler and Freezer Systems for Use in Mix-Match System Ratings," which referenced AHRAE 23.1–2010. AHRI 1250–2020 now provides specific test methods for testing dedicated condensing units

¹⁷ The defrost challenge tests included in AHRI 1250–2020 are informative test methods that provide validation that defrost is occurring as would be expected in Appendix E for adaptive defrost control systems and in Appendix F for hot gas defrost systems. Neither challenge test is designed to quantify the energy use of the defrost system, but are intended to validate defrost system functionality.

¹⁸ DOE is proposing to incorporate Section C3.5 of AHRI 1250–2020 appendix C as a part of the new appendix C1.

tested alone. DOE has tentatively determined that the test procedure incorporated into AHRI 1250–2020 is the same as that in ASHRAE 23.1–2010 and therefore does not impact test setup or burden. As a result, DOE proposes to no longer incorporate ASHRAE 23.1–2010 by reference.

Section C13 of AHRI 1250–2009, “Method of Testing Unit Coolers for Walk-In Cooler and Freezer Systems for Use in Mix-Match System Ratings,” referenced AHRI 420–2008. AHRI 1250–2020 no longer references AHRI 420–2008 and instead outlines a method for unit coolers tested alone. As a result, DOE proposes to no longer incorporate AHRI 420–2008 by reference. DOE has tentatively determined that the test procedure incorporated into AHRI 1250–2020 is the same as that in ASHRAE AHRI 420–2008 and therefore does not impact test setup or burden. As a result, DOE proposes to no longer incorporate AHRI 420–2008 by reference.

C. Proposed Amendments to the Test Procedure in Appendix A for Measuring the Energy Consumption of Walk-in Doors

Appendix A provides the test procedures to measure the energy consumption of the components of envelopes of walk-ins. Specifically, appendix A provides the test procedures to determine the U-factor, conduction load, and energy use of walk-in display panels and to determine the energy use of walk-in display doors and non-display doors. DOE notes that display panels are also subject to the energy consumption test procedure in appendix A. Display panels are discussed in section III.D of this document.

In this NOPR, DOE is proposing to make the following revisions to appendix A, specific to display doors and non-display doors: (1) Reference NFRC 102–2020 in place of NFRC 100 and adopt AEDM provisions; (2) provide further detail on and distinguish the area to be used for determining compliance with standards and the area used to calculate a thermal load from U-factor; (3) establish a percent time off value specific to door motors; and (4) reorganize the test method so that it is easier to follow. The organizational changes include moving the test methods and measurement provisions for determining U-factor up before the provisions for calculating energy consumption and moving the percent time off values for all electrical components into a table. DOE has preliminarily determined that these

changes would improve test representativeness and repeatability.

DOE does not expect that the changes it is proposing in this section would have a substantive impact on energy consumption calculations for display doors or non-display doors, except in the case of testing doors with motors as described in the following paragraphs.

The following sections describe the modifications that DOE is proposing to appendix A with respect to walk-in display doors and walk-in non-display doors.

1. Procedure for Determining Thermal Transmittance (U-Factor)

a. Reference to NFRC 102 in Place of NFRC 100

As discussed in section III.B.1 of this document, section 5.3 of appendix A requires manufacturers to determine thermal transmittance, or “U-factor,” according to NFRC 100. As also mentioned previously, NFRC 100 includes a computational method for determining U-factor, which involves simulating the U-factor using LBNL’s WINDOW and THERM software. Section 4.1.1 of NFRC 100 provides validation requirements so that simulation, rather than a physical test, can be used for rating U-factor for a product line. This approach may be less costly but can result in a different, and potentially less accurate, thermal transmittance value than the thermal transmittance value determined by physical test using NFRC 102. NFRC 100 defines a “product line” as a series of individual products of the same product type, and a “product type” as a designation used to differentiate between fenestration products based on fixed and operable sash and frame members. Section 4.2.1 of NFRC 100 lists the allowable changes from product to product within a product line. DOE notes that “product line” is not synonymous with “basic model” as defined in 10 CFR 431.302. DOE understands that simulated U-factors of non-display doors using NFRC 100 have generally not been accurately determined when compared to a physical test.

In the June 2021 RFI, DOE noted it was considering incorporating by reference NFRC 102 as the test method for determining U-factor of walk-in doors in place of NFRC 100 and adopting AEDM provisions for walk-in doors to replace the computational methodology in NFRC 100. 86 FR 32332, 32336. As part of the June 2021 RFI, DOE requested comment on the accuracy of the computational method in NFRC 100 to predict U-factor for

display and non-display doors, the magnitude of the difference in U-factor determined using the computational method and using the physical test method, and whether the computational method could be modified to more closely match the results obtained from physical testing. DOE also sought comment on whether manufacturers are using the computational method in NFRC 100 to rate U-factors, whether there are other alternative methods for computationally determining U-factor, and the costs associated with NFRC 100 or other computational methods compared to physical testing. 86 FR 32332, 32336.

NFRC stated that the NFRC 100 computational method has been used to accurately simulate U-factors for display doors because the physical characteristics of a display door are similar to the windows and glass doors for which the NFRC 100 computational method was developed. NFRC also stated, however, that there has been limited success validating NFRC 100 simulations with physical tests for non-display doors because non-display doors, unlike windows and glass doors, have high amounts of insulation and significant thermal bypasses along the door perimeter. (NFRC, No. 10 at p. 1) Similarly, AHRI commented that while NFRC 100 is appropriate and accurate for display doors, it was not designed for non-display doors, but it is not aware of an industry test method better suited for non-display doors. (AHRI, No. 11 at p. 4) NFRC stated that while refinements to the computational method in NFRC 100 may be possible for more accurately determining U-factor of non-display doors, they have not yet been addressed due to limited usage of this method for specimens like non-display doors. NFRC also stated that the computational method does not always result in higher or more conservative U-factors than the U-factors determined through physical test, and that the test and simulation agreement vary in either direction. (NFRC, No. 10 at p. 1)

Anthony and Hussmann stated that in their experience, the U-factors generated using the computational method in NFRC 100 generally align with the U-factors obtained from the physical test method, NFRC 102. (Anthony, No. 8 at p. 2; Hussmann, No. 18 at p. 5) Imperial Brown stated that it is possible to simulate U-factor of non-display doors if the door frame is included in the simulation and provided example simulation cross-sections. (Imperial Brown, No. 15 at p. 2)

The CA IOUs recommended that the physical test method ASTM C1199 be

used for doors and window assemblies to provide a measured approach that can be compared to the current calculated method. (CA IOUs, No. 14 at p. 5) Hussmann recommended using the computational method exclusively, except for the physical testing of one model per product line required for validation, stating that physical testing imposes an unnecessary burden on a manufacturer. (Hussmann, No. 18 at p. 5) Imperial Brown asserted that NFRC 102 is costly and time consuming to conduct, and that it is unrealistic to test all of the models they offer since the walk-in door market is highly customizable. Imperial Brown supported continuing to use NFRC 100 and recommended a “safety factor” be included to make up for potential inaccuracies of the computational method. (Imperial Brown, No. 15 at pp. 1–2)

Anthony urged DOE to eliminate the requirement for a physical test, stating that there is no added value for it and that physical testing is more than two times the cost of the computational method. Anthony also stated, however, that if NFRC 100 remains the referenced industry test method, the test procedure should specify a course of action if the computational method results fall outside the 10 percent acceptance criteria. (Anthony, No. 8 at p. 2)

NFRC stated that developing an AEDM would be inefficient as the computational method described in NFRC 100 has been shown to be accurate. (NFRC, No. 10 at p. 1) Additionally, NFRC estimated a cost of \$2,000 for simulating U-factors for a typical product line of display doors (about 35–50 U-factor values). NFRC emphasized that there is no economy of scale in performing more physical tests because each sample must be tested on its own and requires its own specific setup and time to run. NFRC suggested that given the U-factors of non-display doors cannot typically be simulated within the agreement specified by NFRC 100, the most economical way to determine U-factor for a product line would be to pick a few sizes within the range of offerings and use the worst-case U-factors to represent a range of sizes. (*Id.* At p. 2)

In response to comments received on the accuracy of the computational method, DOE understands that there has been limited success in accurately simulating the U-factor of non-display doors using NFRC 100. Although stakeholders asserted that NFRC 100 can accurately simulate display door U-factors, the recommendation by one stakeholder that instruction be provided when the simulated value and tested

value do not agree within the limits specified by NFRC 100 suggests there may be instances when the computational method does not provide sufficiently accurate results. DOE recognizes that if display or non-display door manufacturers are unable to simulate U-factor using NFRC 100, they are currently required to physically test every door basic model, which may be unduly burdensome given the highly customizable nature of the market and thus high number of basic models to test.

In this NOPR, DOE is proposing to remove reference to NFRC 100 from its test procedure and instead reference NFRC 102 and adopt provisions allowing manufacturers to use an AEDM. DOE emphasizes that allowing use of an AEDM would provide manufacturers with the flexibility to use an alternative method that yields the best agreement with a physical test for their doors. If manufacturers have had success using the computational method in NFRC 100, inclusion of AEDM provisions would enable manufacturers to continue using NFRC 100, provided that manufacturers meet the proposed AEDM requirements in 10 CFR 429.53 and 10 CFR 429.70(f). Particularly, under the proposals, manufacturers would need to ensure that the output result of energy consumption from the AEDM is within the proposed 5 percent tolerance of an energy consumption result that includes a physical U-factor test. The proposed adoption of an AEDM is discussed in more detail in section III.H.1.

b. Exceptions to Industry Test Method for Determining U-Factor

Section 5.3 of appendix A references NFRC 100 for determining U-factor with the specific modifications to the industry standard listed in section 5.3(a). The first modification specifies that the average surface heat transfer coefficients during a test must be within ± 5 percent of the values specified through NFRC 100 in ASTM C1199. The second and third items modify the cold and warm side conditions from the standard conditions prescribed in NFRC 100. The final provision listed specifies the direct solar irradiance¹⁹ be 0 Btu/(h-ft²).

As discussed in the June 2021 RFI, DOE has found that obtaining the standardized heat transfer values within the tolerances specified in section 5.3(a)(1) of appendix A on the warm-side and cold-side may not be

achievable depending on the thermal transmittance through the door. 86 FR 32332, 32340. Specifically, the warm-side heat transfer is dominated by natural convection and radiation and the heat transfer coefficient varies as a function of surface temperature. When testing doors with higher thermal resistance, less heat is transferred across the door from the warm-side to the cold-side, so the warm-side surface temperature is closer to the warm-side air temperature.

Sections 6.2.3 and 6.2.4 of ASTM C1199 specify the standardized heat transfer coefficients and their tolerances as part of the procedure to set the surface heat transfer conditions of the test facility using the Calibration Transfer Standard (“CTS”) test. The warm-side surface heat transfer coefficient must be within ± 5 percent of the standardized warm-side value of 1.36 Btu/(h-ft²-°F), and the cold-side surface heat transfer coefficient must be within ± 10 percent of the standardized cold-side value of 5.3 Btu/(h-ft²-°F) during the CTS test (ASTM C1199, Sections 6.2.3 and 6.2.4). ASTM C1199 does not require that the measured surface heat transfer coefficients match or be within a certain tolerance of standardized values during the official sample test—although test facility operational (*e.g.*, cold side fan settings) conditions would remain identical to those set during the CTS test. ASTM C1199 also does not require measurement of the warm-side surface temperature of the door. Rather, this value is calculated based on the radiative and convective heat flows from the test specimen’s surface to the surroundings, which are driven by values determined from the calibration of the hot box using the CTS test (*e.g.*, the convection coefficient). *See* ASTM C1199, Section 9.2.1. When testing doors with extremely high- or low-thermal resistance, the resulting change in warm-side surface temperature can shift the warm-side heat transfer coefficient out of the tolerance specified in the DOE test procedure. To ensure that these coefficients are within tolerance during the test would require recalibration of the hot box for each specific door.

As part of the June 2021 RFI, DOE requested feedback on the tolerances currently specified in section 5.3(a)(1) of appendix A applied to the surface heat transfer coefficients used to measure thermal transmittance and whether they should be increased or omitted. 86 FR 32332, 32340.

In response, NFRC asserted that applying the surface heat transfer coefficient tolerances to the surface heat

¹⁹ Solar irradiance is the power per unit area received from the sun in the form of electromagnetic radiation.

transfer coefficients determined in the actual U-factor test is not a correct application of the NFRC 102 test method and recommended that the tolerances be removed from section 5.3(a)(1) of appendix A. NFRC additionally stated that the idea behind the CTS calibration tests is to set up a consistent set of fan speeds on both sides of the chamber or to create consistent cold and warm side environments for testing of all products. NFRC further stated that the convection currents will be influenced during sample testing by the surface temperatures of the test sample and that this is an expected and natural occurrence. (NFRC, No. 10 at pp. 3–4)

Given DOE's experience with testing walk-in doors and the comments provided by NFRC, DOE is proposing to remove the requirement listed in section 5.3(a)(1) regarding the surface heat transfer coefficients and the tolerances on them during testing.

Additionally, while DOE did not request specific comment on the surface heat transfer coefficients themselves (*i.e.*, the warm side value of 1.36 Btu/(h·ft²·°F) and cold side value of 5.3 Btu/(h·ft²·°F)), Anthony commented that the heat transfer coefficient applied to the cold side of the test specimen correlates to a wind speed roughly equivalent to 12.3 miles per hour (“mph”). Anthony stated that their field testing has demonstrated that the wind speed interior to the walk-in is below 5 mph. (Anthony, No. 8 at pp. 3–4)

DOE is not proposing to deviate from the surface heat transfer coefficients specified in NFRC 102–2020 for calibration because additional investigation is needed. Deviating from these surface heat transfer coefficients would require test labs to change their test chamber calibration procedures and would require manufacturers to retest and re-rate all envelope components subject to the energy consumption test procedure in appendix A. DOE may consider changes to the surface heat transfer coefficients specified in NFRC 102–2020 for calibration in the future if more data became available regarding the internal and external conditions of walk-ins in various installations. At this time however, more data and Departmental analysis would need to be conducted to support any changes to the surface heat transfer coefficients specified in NFRC 102–2020.

DOE also received comment on the direct solar irradiance requirement. NFRC stated that direct solar irradiance of 0 Btu/(h·ft²) listed in section 5.3(a)(4) of appendix A is not an exception to NFRC 100 and should be removed from appendix A. (NFRC, No. 10 at p. 4)

Consistent with DOE's proposal to remove reference to NFRC 100, DOE proposes to remove this requirement in section 5.3(a)(4) of appendix A.

c. Calibration of Hot Box for Measuring U-Factor

As stated previously, NFRC 100 references NFRC 102 as the physical test method for measuring U-factor, which in turn incorporates by reference ASTM C1199. ASTM C1199 references ASTM C1363–05, “Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus” (“ASTM C1363”). Section 6.1 of ASTM C1199 and Annexes 5 and 6 of ASTM C1363 include calibration requirements to characterize metering box wall loss and surround panel flanking loss, but the frequency at which these calibrations should occur is not specified in these test standards. As part of the June 2021 RFI, DOE sought comment on the frequency at which test laboratories perform each of the calibration procedures referenced in ASTM C1199 and ASTM C1363, *e.g.*, those used to determine the calibration coefficients for calculating metering box wall loss and surround panel flanking loss. 86 FR 32332, 32340. DOE also requested comment on the magnitude of variation in the calibration coefficients measured during successive calibrations. *Id.*

NFRC stated that because the referenced ASTM standards (*i.e.*, ASTM C1199 and ASTM C1363) do not specify frequency of calibration, NFRC 102 includes calibration frequency requirements in section 6.1. NFRC stated that section 6.1 requires that metering box wall loss and surround panel flanking loss be determined once and verified annually as these values would not inherently change over time. It noted that the verification of the metering box wall loss and surround panel flanking loss requires results to be within 2 Watts of previous characterization results. NFRC added that their experience shows that these results repeat well over time and that an increase in calibration frequency is unnecessary. (NFRC, No. 10 at p. 3)

As NFRC stated, the most recent version of NFRC 102, NFRC 102–2020, includes calibration frequencies and requirements in section 6.1(A). The currently referenced version of NFRC 102, NFRC 102–2010, does not include these calibration requirements. For this reason and because of the comments provided by NFRC, DOE is proposing to adopt the calibration requirements in Section 6.1(A) of NFRC 102–2020.

2. Additional Definitions

a. Surface Area for Determining Compliance With Standards

The surface area of display doors and non-display doors (designated as A_{dd} and A_{nd} , respectively) are used to determine maximum energy consumption (“MEC”) in kWh/day of a walk-in door. 10 CFR 431.306(c)–(d). Surface area is currently defined in section 3.4 of appendix A as “the area of the surface of the walk-in component that would be external to the walk-in cooler or walk-in freezer as appropriate.” As currently written, the definition does not provide further detail on how to determine the boundaries of the walk-in door from which height and width are determined to calculate surface area. Additionally, the definition does not specify if these measurements are to be strictly in-plane with the surface of the wall or panel that the walk-in door would be affixed to, or if troughs and other design features on the exterior surface of the walk-in door should be included in the measured surface area. Inconsistent determination of surface area, specifically with respect to the measurement boundaries, may result in unrepresentative and inconsistent MEC values. Additionally, walk-in doors with antisweat heaters are subject to prescriptive standards for power use of antisweat heaters per square foot of door opening. 10 CFR 431.306(b)(3)–(4). DOE considers the area of the “door opening” to be consistent with the surface area used to determine MEC.

Display doors are fundamentally different from non-display doors in terms of their overall construction. For example, display door assemblies contain a larger frame that can encompass multiple door openings or leaves, and the entire assembly fits into an opening within a walk-in wall. Non-display doors differ in that they often are affixed to a panel-like structure that more closely resembles a walk-in wall rather than a traditional door frame.

In the June 2021 RFI, DOE described how it applies the current test procedure definition for surface area when determining compliance with standards. 86 FR 32332, 32337. As part of the June 2021 RFI, DOE requested comment on how manufacturers determine surface area for the purpose of evaluating compliance with the MEC performance standards and with the prescriptive standards pertaining to antisweat heaters for both display and non-display doors. *Id.*

AHRI and Hussmann stated that they determine surface area consistent with DOE, and that they do not see any

distinctions between display doors and non-display doors that warrant determining surface area differently. (AHRI, No. 11 at p. 7; Hussmann, No. 18 at p. 9) Anthony stated that they include the frame and frame flange as part of the door assembly when determining door surface area. Anthony also stated that, contrary to how they determine surface area, Figure 4–2 of NFRC 100–2017 excludes frame flanges. (Anthony, No. 8 at pp. 2–3) Imperial Brown stated that the area for non-display doors, A_{nd} , should be the clear opening area, or WIC by HIC, which excludes the door frame portion of the door assembly. They also stated that the clear opening area may be smaller than the swinging or sliding portion of the door, which typically overlaps a portion of the door frame. (Imperial Brown, No. 15 at p. 2)

With regard to the prescriptive anti-sweat heater standards, Anthony agreed that the power use of anti-sweat heat per square foot is consistent with the surface area used to determine MEC. (Anthony, No. 8 at pp. 2–3) AHRI and Hussmann stated that they do not see a need to change requirements for the prescriptive standards pertaining to anti-sweat heaters. (AHRI, No. 11 at p. 7; Hussmann, No. 18 at p. 9)

In response to comments received, DOE notes that the description of surface area for determining MEC in the June 2021 RFI considers the structural differences between display and non-display doors and assumes different bounds for determining the surface area of display doors and non-display doors. As described previously, DOE includes the frame in the surface area calculation for display doors, whereas the panel-like frame of non-display doors has not been included in the surface area calculation. However, DOE has observed that many electrical components of non-display doors are sited on or within the frame to which the door is attached. If the non-display door frame is not considered as part of the non-display door, the frame would fall under the category of a walk-in panel. However, the current test procedure for panels does not account for electrical energy consumption. Many of the electrical components sited on the non-display door frame serve a function for operation of the door itself. For example, to keep non-display doors from freezing shut, anti-sweat heaters are used to prevent condensation from accumulating around the edge of the door.

Comments received regarding surface area determination suggest that the approach provided in appendix A may result in inconsistent interpretations as

to how to determine this measurement. To clarify this issue, DOE is proposing additional specification on how the surface area is measured. DOE is proposing that the surface area bounds of both display doors and non-display doors be the outer edge of the frame. Specifically, DOE proposes to revise the term “surface area” to “door surface area,” and to define the new term as meaning the product of the height and width of a walk-in door measured external to the walk-in. Under this definition, the height and width dimensions would be perpendicular to each other and parallel to the wall or panel of the walk-in to which the door is affixed, the height and width measurements would extend to the edge of the frame and frame flange (as applicable) to which the door is affixed, and the surface area of a display door and non-display door would be represented as A_{dd} and A_{nd} , respectively. In addition, DOE proposes to move the defined term from the test procedure in appendix A because, as revised and in light of the following proposal in section III.C.2.b, this term does not apply to the proposed test procedure and is only relevant for determining compliance with the standards. Instead, DOE proposes to include the amended term and revised definition with the other definitions that are broadly applicable to subpart R in 10 CFR 431.302.

b. Surface Area for Determining U-Factor

As stated previously, appendix A currently references NFRC 100, which in turn references NFRC 102 for the determination of U-factor through a physical test. When conducting a simulation, the U-factor is calculated using the projected fenestration product area (A_{pt}), or the area of the rough opening in the wall or roof, for the fenestration product, less installation clearances. See NFRC 100, section 3. When conducting physical testing, the U-factor (U_s) is calculated using projected surface area (A_s) and is then converted to the final standardized U-factor (U_{ST}). See ASTM C1199, sections 8.1.3 and 9.2.7 as referenced through NFRC 102. Projected surface area (A_s) is defined as “the projected area of test specimen (same as test specimen aperture in surround panel).” See ASTM C1199, section 3.3 as referenced through NFRC 102.

Currently, equations 4–19 and 4–28 of appendix A specify that surface area of display doors (A_{dd}) and non-display doors (A_{nd}), respectively, are used to convert a door’s U-factor into a conduction load. This conduction load

represents the amount of heat that is transferred from the exterior to the interior of the walk-in.

As discussed in section III.C.2.a, DOE is proposing to amend the definitions of A_{nd} and A_{dd} to be specific to the exterior plane of the door, including the frame and frame flange as appropriate. Defining the area in this manner is inconsistent with the area (A_s) used to calculate U-factor in NFRC 102–2020.

As part of the June 2021 RFI, DOE sought comment on this inconsistency and feedback on specifying additional detail for the surface area used to determine thermal conduction through a walk-in door to differentiate it from the surface area used to determine the maximum energy consumption of a walk-in door. 86 FR 32332, 32337.

NFRC stated that the area used to convert U-factor into energy use and the area used to determine U-factor must be consistent when calculating conduction load from thermal transmittance. (NFRC, No. 10 at pp. 2–3) NFRC also observed that NFRC 100, NFRC 102, ASTM C1199 and ASTM C1363 all define the area for U-factor based “n “projec”ed” specimen “r “open”ng” area in the wall through which the door is installed. *Id.* NFRC further asserted that since the surface area as defined by A_{dd} and A_{nd} are different from the projected area, heat flow is miscalculated when the tested U-factor is inserted into equations 4–19 and 4–28. *Id.* AHRI and Hussmann declared that they determine surface area in a manner consistent with the DOE regulations in 10 CFR parts 429 and 431 and that they do not see a distinction that warrants determining surface area differently in these instances. (AHRI, No. 11 at p. 7; Hussmann, No. 18 at p. 9)

Imperial Brown stated that for a non-display door, the outer frame is equivalent to a walk-in panel and therefore the frame would have a limited impact on the U-factor calculation of the swinging or sliding portion of the door. (Imperial Brown, No. 15 at p. 2) Imperial Brown separately defined the two types of non-display doors they manufacture, defining a “panel frame” as a frame that is connected in-line with other walk-in panels and a “flat frame” as a frame that is typically used in retrofit applications or by door-only manufacturers which are non-insulating and mount over and are fastened to walk-in panels. (*Id.* at p. 1) Imperial Brown suggested that manufacturers not be required to separately test basic models for U-factor which differ in their frame type because they believe “panel” frames and “flat” frames to be equivalent in performance

once mounted. Imperial Brown recommended that the same U-factor determined for a door with a “panel frame” be used for an otherwise the same door with a “flat frame.” (*Id.* at p. 2)

Based on this feedback, DOE has preliminarily determined that using the same area that is used to determine U-factor (A_s in NFRC 102 and ASTM C1199 as referenced) to convert U-factor into a conduction load, rather than the proposed revised term for door surface area in section III.C.2.a (A_{dd} or A_{nd}) results in a more representative conduction load and provides for improved consistency in application of the test procedure across all walk-in doors. As such, DOE proposes to specify that the projected area of the test specimen, A_s , as defined in ASTM C1199, or the area used to determine U-factor is the area used for converting the tested U-factor, U_{ST} , into a conduction load in appendix A. DOE recognizes that this may not change ratings for some doors, where A_s is equivalent to A_{nd} or A_{dd} , but it may result in slightly lower ratings of energy consumption for other doors, where A_s is less than A_{nd} or A_{dd} . DOE expects that since this proposed detail would either result in a reduced energy consumption or have no impact, there would be no need for manufacturers to retest or re-rate. Additional details on how this proposed detail impacts retesting and re-rating are further discussed in section III.J.1.

In response to Imperial Brown’s assertion that the frame has a limited impact on the thermal performance of the door, DOE testing of non-display doors found that inclusion of the frame in the U-factor test (which resulted in a 34 to 52 percent increase in total door area) increased the heat transferred through the door assembly by 23 to 139 percent compared to heat transfer through the door leaf alone. This implies that including the frame in the U-factor test does have a measurable impact on the thermal performance of the door assembly. Therefore, DOE also proposes to specify in appendix A that the U-factor test includes the frame of the door to improve consistency in application of the test procedure across all walk-in doors.

3. Electrical Door Components

Sections 4.4.2 and 4.5.2 of appendix A include provisions for calculating the direct energy consumption of electrical components of display doors and non-display doors, respectively. For example, electrical components associated with doors could include, but are not limited to: Heater wire (for anti-sweat or anti-freeze application); lights

(including display door lighting systems); control system units; and sensors. *See* appendix A, sections 4.4.2 and 4.5.2. For each electricity-consuming component, the calculation of energy consumption is based on the component’s “rated power” rather than a measurement of its power draw. Section 3.5 of appendix A defines “rated power” as the electricity consuming device’s power as specified (1) on the device’s nameplate or (2) from the device’s product data sheet if the device does not have a nameplate or such nameplate does not list the device’s power.

DOE has observed that walk-in doors often provide a single nameplate for the door, rather than providing individual nameplates for each electricity-consuming device. In many cases, the nameplate does not provide separate power information for the different electrical components. Also, the nameplate often specifies voltage and amperage (a measure of current) ratings without providing wattage (a measure of power) ratings, as is referenced by the definition of “rated power.” While the wattage is equal to voltage multiplied by the current for many components, this may not be true for all components that may be part of a walk-in door assembly. Furthermore, nameplate labels typically do not specify whether any listed values of rated power or amperage represent the maximum operation conditions or continuous steady state operating conditions, which could differ for components such as motors that experience an initial surge in power before power use levels off. These issues make calculating a door’s total energy consumption a challenge for a test facility that does not have in-depth knowledge of the electrical characteristics of the door components.

As part of the June 2021 RFI, DOE requested comment on whether, and if so how, an option for direct component power measurement could be included in the test procedure or DOE’s CCE provisions to allow for a more accurate accounting of the direct electrical energy consumption of WICF doors. 86 FR 32332, 32338.

ASAP supported adding an option for direct measurement of power consumed by door electrical components. (ASAP, No. 13 at p. 1) The CA IOUs also supported direct measurement of power used by door components, but more specifically for components designed to operate at partial nameplate power such as door motors or powered door closers. The CA IOUs stated that, in their experience, power measurement for resistance components like lighting and door heaters are not necessary if these

components are designed to operate at full nameplate power. They recommended that the electrical energy consumption of door motors be reported per door opening and that the electrical energy consumption be calculated as the actual power consumption of the motor multiplied by the duration of the door opening and closing. (CA IOUs, No. 14 at p. 4) Hussmann and Imperial Brown supported maintaining the current approach of using rated power for calculating direct electrical energy consumption and did not see a need for the measurement option. (Hussmann, No. 18 at p. 10; Imperial Brown, No. 15 at pp. 2–3) Imperial Brown also stated that control components are typically rated at 5 Watts or less and that they should be excluded from the calculation of direct electrical energy consumption. (Imperial Brown, No. 15 at pp. 2–3)

DOE is not proposing to include provisions requiring measurement of power consumption of electrical door components in the test procedure in appendix A because additional investigation is needed. However, DOE has observed that some manufacturers may be certifying door motor power as the output power rating of the motor, rather than the input power of the motor. Thus, DOE is proposing to specify in appendix A that the rated power of each electrical component, $P_{rated,u,i}$, would be the rated input power of each component because the input power represents power consumption.

Additionally, DOE has observed through testing that the measured power of some walk-in door electrical components exceeds either the certified or nameplate power values of these electrical components. For the purposes of enforcement testing, DOE is proposing in 10 CFR 429.134(q) that DOE may validate the certified or nameplate power values of an electrical component by measuring the power when the device is energized using a power supply that provides power within the allowable voltage range listed on the nameplate. If the measured input power is more than 10 percent higher than the power listed on the nameplate or the rated input power in a manufacturer’s certification, then the measured input power would be used in the energy consumption calculation. For electrical components with controls, the maximum input wattage observed while energizing the device and activating the control would be considered the measured input power.

4. Percent Time Off Values

The test procedure also assigns percent time off (“PTO”) values to various walk-in door components. PTO

values are applied to reflect the hours in a day that an electricity-consuming device operates at its full-rated or certified power (*i.e.*, daily component energy use is calculated assuming that

the component operates at its rated power for a number of hours equal to 24 multiplied by $-1 - \text{PTO}$). PTO values are not incorporated in the rated or certified power of an electricity-

consuming device. Table III.3 lists the PTO values in the current DOE test procedure for walk-in doors.

TABLE III.3—ASSIGNED PTO VALUES FOR WALK-IN DOOR COMPONENTS

Component type	Percent time off (PTO) (%)
Lights without timers, control system or other demand-based control	25
Lights with timers, control system or other demand-based control	50
Anti-sweat heaters without timers, control system or other demand-based control	0
Anti-sweat heaters on walk-in cooler doors with timers, control system or other demand-based control	75
Anti-sweat heaters on walk-in freezer doors with timers, control system or other demand-based control	50
All other electricity consuming devices without timers, control systems, or other auto-shut-off systems	0
All other electricity consuming devices for which it can be demonstrated that the device is controlled by a preinstalled timer, control system or other auto- shut-off system	25

As discussed in the June 2021 RFI, DOE has granted waivers to several manufacturers of doors with motorized

door openers, allowing for the use of a different PTO for motors. 86 FR 32332, 32338–32339. The manufacturers who

requested and were granted waivers and the PTO defined in their alternate test procedure are shown in Table III.4.

TABLE III.4—PTO VALUES GRANTED IN DECISION AND ORDERS FOR MANUFACTURERS OF DOORS WITH MOTORIZED DOOR OPENERS

Manufacturer	Percent time off (PTO) (%)	Decision and order Federal Register citation
HH Technologies	96	83 FR 53457. (Oct. 23, 2018).
Jamison Door Company	93.5	83 FR 53460. (Oct. 23, 2018).
Senneca Holdings	97	86 FR 75. (Jan. 4, 2021).
Hercules	92	86 FR 17801. (Apr. 6, 2021).

In the June 2021 RFI, DOE requested comment on the current PTO values for all electricity-consuming devices, whether these values should be amended, and whether specific values should be added for certain electrical components, such as motors. 86 FR 32332, 32339.

In response, Hussmann stated that they determine energy consumption consistent with DOE's regulations in parts 429 and 431 and do not see a need to change the current PTO values. (Hussmann, No. 18 at p. 10) ASAP supported adding specific PTO values for motorized door openers because they believe it will provide similar treatment for these components as for other electrical components and eliminate the need for ongoing test procedure waivers. (ASAP, No. at p. 1) The CA IOUs recommended that DOE reduce the usage factor of door opening motors from 75 percent to 5 percent or less (*i.e.*, implement a PTO of 95 percent or greater). In their comments, the CA IOUs provided anecdotal data for two food service sites where doors were open an average of 20 and 40 minutes per day. The CA IOUs observed that if

these doors had motors, the motor on time would be even less than the time recorded in the open position. Additionally, the CA IOUs recommended that DOE explore the differences in opening patterns among passage, freight, and display doors and potentially adjust the door motor PTO based on door opening pattern for each corresponding class. (CA IOUs, No. 14 at pp. 5–6)

As shown in Table III.4, each manufacturer requested a PTO value specific to their door and motor characteristics, resulting in four different PTO values. For this proposal, DOE evaluated a PTO that could be used to consistently evaluate energy consumption of doors with motors and would be sufficiently representative. Recognizing that the PTO values requested in the waivers are relatively close to one another, DOE calculated an average PTO value based on the information received in the waivers and is proposing to specify one PTO value for all basic models of doors with motors to use. This approach results in a more representative test procedure for doors with motors as compared to the

current value specified for other electricity-consuming devices in appendix A. The intent of the PTO value is not to reflect behaviorally-related energy consumption of each individual installation of a door with a motor, but to provide a more representative means for comparison of walk-in door performance.

DOE calculated an average PTO value, as follows. For each motorized door offering from manufacturers that were granted waivers, DOE used the cycle rating as specified in the product literature. When a cycle rating was not provided in the product literature, DOE used its previously estimated number of door openings per day of 60 for passage doors and 120 for freight doors, respectively.²⁰ 75 FR 55068, 55085.

²⁰ DOE's previously estimated door openings per day were relevant for a proposal to address door opening infiltration in the test procedure introduced in a supplemental notice of proposed rulemaking from September 9, 2010. Ultimately, DOE did not adopt test procedure provisions addressing door opening infiltration, having determined that a typical door manufacturer has very few direct means for reducing the door

DOE then calculated the PTO range for each motor offering using the cycle rating or DOE's cycle assumption, the maximum opening size offered by the manufacturer, and the minimum and maximum operating speeds of the motor. DOE averaged these PTO ranges across each motor offering and then averaged them across all manufacturers. This yielded an average PTO of 97 percent.

Considering the waivers granted, DOE's own calculations, and comments received, DOE is proposing to adopt a door motor PTO value of 97 percent for display doors with motors and non-display doors with motors.

As discussed in the June 2021 RFI, DOE is aware that some manufacturers design and market walk-in cooler display doors for high humidity applications. Ratings from the CCMS database show these doors have more anti-sweat heater power per door opening area than standard cooler display doors. 86 FR 32332, 32339. Section 4.4.2(a)(2) of appendix A requires a PTO value of 50 percent be used when determining the direct energy consumption for anti-sweat heaters with timers, control systems, or other demand-based controls situated within a walk-in cooler door (which would include walk-in cooler doors marketed for high humidity applications). This approach assumes that the anti-sweat heaters are not operating for 50 percent of the time. DOE recognizes that anti-sweat heaters may be in operation for a different amount of time in high humidity installations than in standard installations. In the June 2021 RFI, DOE requested comment on whether the current PTO of 50 percent is appropriate for evaluating direct energy consumption of anti-sweat heaters with controls for walk-in cooler doors marketed for high humidity applications and the amount of time per day or per year that anti-sweat heaters with controls are off for high humidity doors. *Id.*

In response, DOE received comments from Anthony, AHRI, and Hussmann regarding the maximum energy consumption of high humidity doors. (Anthony, No. 8 at p. 3; AHRI, No. 11 at pp. 7–8; Hussmann, No. 18 at p. 10) However, as the responses of these comments were more focused on the standards, DOE plans to address these comments as part of a separate standards rulemaking for this equipment. DOE did not receive any comments regarding whether the PTO in

the test procedure for anti-sweat heaters with controls sited on high humidity doors should be modified nor any data on the amount of time the anti-sweat heaters operate on high-humidity doors as compared to standard doors (*i.e.*, cooler display doors). DOE is not proposing any changes to the PTO values for anti-sweat heaters sited on high humidity doors at this time.

5. EER Values

To calculate the daily energy consumption associated with heat loss through a walk-in door, appendix A requires dividing the calculated heat loss rate by specified energy efficiency ratio (“EER”) values of 12.4 Btu per Watt-hour (“Btu/W-h”) for coolers and 6.3 Btu/(W-h) for freezers. Appendix A, sections 4.4.4(a) and 4.5.4(a). DOE selected EER values of 12.4 Btu/(W-h) for coolers and 6.3 Btu/(W-h) for freezers because these are typical EER values of walk-in cooler and walk-in freezer refrigeration systems, respectively.²¹ 75 FR 186, 209 (Jan. 4, 2010); 76 FR 21580, 21593–21594 (Apr. 15, 2011). The DOE test procedure in subpart R, appendix C, also assigns nominal EER values, which correspond to the appropriate adjusted dew point temperature in Table 17 of AHRI 1250–2009,²² when testing the refrigeration systems of walk-in unit coolers alone. The resulting EER values for unit coolers tested alone are 13.3 Btu/(W-h) for coolers and 6.6 Btu/(W-h) for freezers, which are different than the EER values of 12.4 Btu/(W-h) and 6.3 Btu/(W-h), respectively, applied to walk-in doors, as described previously. In the June 2021 RFI, DOE sought feedback on the EER values specified in appendix A used to calculate daily energy consumption for walk-in doors

²¹ The difference in EER values between coolers and freezers reflects the relative efficiency of the refrigeration equipment for the associated application. 75 FR 186, 197. As the temperature of the air surrounding the evaporator coil drops (that is, when considering a freezer relative to a cooler), thermodynamics dictates that the system effectiveness at removing heat per unit of electrical input energy decreases. *Id.*

²² The dewpoint temperature to be used for testing unit coolers alone is defined in section 3.3.1 of appendix C to be the Suction A saturation condition provided in Tables 15 or 16 of appendix C (for refrigerator unit coolers and freezer unit coolers, respectively). Table 15 for refrigerator unit coolers defines the Suction A saturation condition (*i.e.*, dewpoint temperature) as 25 °F. Table 16 for freezer unit coolers defines the Suction A dewpoint temperature as –20 °F. Furthermore, section 7.9.1 of AHRI 1250–2009 specifies that for unit coolers rated at a suction dewpoint other than 19 °F for a coolers and –26 °F for a freezer, the Adjusted Dewpoint Value shall be 2 °F less than the unit cooler rating suction dewpoint—resulting in adjusted dewpoint values of 23 °F and –22 °F for refrigerator unit coolers and freezer unit coolers, respectively.

and the values used to test unit coolers as specified in subpart R, appendix C. Specifically, DOE requested comment on whether the EER values used for door testing and unit cooler testing consistent with each other, and if so, which values are more representative. 86 FR 32332, 32339.

Anthony responded that the EER values referenced in subpart R, appendix C (*i.e.*, 13.3 Btu/(W-h) for coolers and 6.6 Btu/(W-h) for freezers), better reflect current compressor efficiency for walk-in refrigeration systems. (Anthony, No. 8 at p. 3) National Refrigeration encouraged DOE to keep the current EER values, stating that they believe the values are accurate, but did not specify if they were referring to walk-in door or refrigeration system EER values. (National Refrigeration, No. 17 at p. 1) Keeprite, Lennox, and AHRI all supported maintaining the EER values applicable to unit coolers in subpart R, appendix C. (Keeprite, No. 12 at p. 2; Lennox, No. 9 at p. 4; AHRI, No. 11 at p. 8)

Based on the comments received, it is not clear that there is an advantage to harmonizing the EER values between appendix A and subpart R, appendix C. Therefore, DOE is not proposing to change the subpart R, appendix C, EER values pertaining to walk-in refrigeration systems.

Additionally, with respect to envelope components, DOE is not proposing to align the EER values in appendix A for calculating the energy consumption of envelope components with the EER values used for testing unit coolers alone in subpart R, appendix C, at this time. DOE originally defined nominal EER values in appendix A because an envelope component manufacturer generally cannot control what refrigeration equipment is installed, and the defined EER value is intended to provide a nominal means of comparison rather than reflecting an actual walk-in installation. 76 FR 21580, 21593 (Apr. 15, 2011). In other words, the EER values used to estimate energy consumption of the envelope components is a constant. DOE notes that the difference between the EER values used in appendix A for doors and those used in subpart R, appendix C, for unit coolers is seven percent for coolers and five percent for freezers, which would have minimal impact on rated values but would require manufacturers to retest and re-rate energy consumption without necessarily providing a more representative test procedure.

6. Air Infiltration Reduction

EPCA includes prescriptive requirements for doors used in walk-in applications which are intended to reduce air infiltration. Specifically, walk-ins must have (A) automatic door closers that firmly close all walk-in doors that have been closed to within 1 inch of full closure (excluding doors wider than 3 feet 9 inches or taller than 7 feet), and (B) strip doors, spring-hinged doors, or other method of minimizing infiltration when doors are open. (42 U.S.C. 6313(f)(1)(A)–(B)) DOE previously proposed methods for determining the thermal energy leakage due to steady state infiltration through the seals of a closed door and door opening infiltration. DOE did not ultimately adopt these methods as part of the test procedure because DOE concluded that steady state infiltration was primarily influenced by on-site assembly practices rather than the performance of individual components. 76 FR 21580, 21594–21595 (April 15, 2011) (“April 2011 final rule”). Similarly, DOE stated that, based on its experience with the door manufacturing industry, door opening infiltration is primarily reduced by incorporating a separate infiltration reduction device at the assembly stage of the complete walk-in. *Id.* In the June 2021 RFI, DOE invited comment on whether it should account for steady state and/or door opening infiltration in its test procedure. 86 FR 32332, 32340–32341. DOE also requested test methods and calculations to quantify heat load, the associated costs of any suggested methods, and supporting data on door usage patterns. *Id.*

ASAP encouraged DOE to incorporate a measurement of air infiltration into the test procedure for walk-in doors because it would improve representativeness and encourage the development and deployment of technologies that could reduce infiltration and save energy. (ASAP, No. 13 at p. 2) The CA IOUs recommended that DOE consider specifically incorporating door opening infiltration energy into the test procedure. They also suggested that DOE validate the actual savings of devices such as air curtains to determine if the test method should be refined to more accurately represent these features in the determination of walk-in performance. (CA IOUs, No. 14 at p. 6) In contrast, Imperial Brown stated that including air infiltration in the test procedure would be burdensome and cost prohibitive because most WICF doors are custom-made. (Imperial Brown, No. 15 at p. 3)

DOE is not proposing to include air infiltration in the test procedure for determining energy consumption of walk-in envelope components at this time because additional investigation is needed. DOE intends to consider data on the magnitude of air infiltration for walk-ins as it becomes available for appropriate evaluation of the representativeness of including it in the test procedure for walk-in doors. However, as previously mentioned, EPCA requires air infiltration limiting devices on all doors. (42 U.S.C. 6313(f)(1)(A)–(B)) Even though air infiltration is not currently evaluated as part of the current test procedure and is thus not part of the performance standard, all walk-in doors are subject to the prescriptive requirements pertaining to air infiltration limiting devices.

D. Proposed Amendments to the Test Procedure in Appendix A for Display Panels

Appendix A specifies the test procedure to determine energy consumption of walk-in display panels, which are not currently subject to any performance standards in terms of daily energy consumption, but are subject to the prescriptive requirements at 10 CFR 431.306.

In the June 2021 RFI, DOE requested specific comment on the current test procedure for determining energy consumption for display panels and whether any amendments to this procedure were warranted. 86 FR 32332, 32342. In response, Anthony and NFRC commented that the test procedure for display panels should be identical to the test procedure for display doors. (Anthony, No. 8 at p. 4; NFRC, No. 10 at p. 4)

DOE is proposing that the changes proposed throughout section III.C for determining conduction load and energy consumption of display doors would also be applicable to determining display panel conduction load and energy consumption, except for the provisions applicable to electrical components and percent time off values.

E. Proposed Amendments to the Test Procedure in Appendix B for Panels and Non-Display Doors

The insulation R-value of walk-in non-display panels and non-display doors is determined using appendix B. In this NOPR, DOE is proposing to modify appendix B to improve test representativeness and repeatability. Specifically, DOE is proposing to make the following revisions to appendix B: (1) Reference the updated industry standard ASTM C518–17; (2) include more detailed provisions on measuring

insulation thickness and test sample thickness; (3) provide additional guidance on determining parallelism and flatness of test specimen; and (4) reorganize appendix B so it is easier for stakeholders to follow as a step-by-step test procedure.

DOE does not expect that the changes it is proposing in this section would have a significant impact on measured R-value of insulation. Rather, the revisions proposed for appendix B address repeatability issues that DOE has observed through its testing of the insulation of walk-in panels.

The following sections describe the modifications that DOE is proposing to appendix B, the test procedure for determining the R-value of walk-in envelope component insulation. DOE discusses the proposed changes specifically in the context of walk-in panels; however, DOE notes that non-display doors are also subject to the prescriptive R-value requirement at 10 CFR 431.306(a)(3) and that the R-value for walk-in door insulation is determined using appendix B.

1. Specimen Conditioning

In the June 2021 RFI, DOE noted that the test specimen conditioning instruction and example given in section 7.3 of ASTM C518 conflict with the provision in section 4.5 of the DOE test procedure at appendix B that requires testing per ASTM C518 be completed within 24 hours of specimens being cut for the purpose of testing. 86 FR 32332, 32341–32342. Section 7.3 of ASTM C518 directs that a test specimen be conditioned prior to testing and states that this be done per material specifications. If material specifications for conditioning are not provided, the specimen preparation shall be conducted so as not to expose the specimen to conditions which would change the specimen in an irreversible manner. Section 7.3 of ASTM C518 provides an example of a material specification that requires test specimen conditioning at 72 °F and 50 percent relative humidity until less than a one percent change in mass is observed over a 24-hour period. As part of the June 2021 RFI, DOE sought comment on whether manufacturers of insulation specify conditioning for insulation materials that differ from the typical approach described in ASTM C518. DOE also requested feedback on whether more than one 24-hour conditioning period is ever needed to complete specimen conditioning given ASTM’s requirement regarding change in mass. Lastly, DOE requested data on panel performance for conditioning times less than 24 hours, specifically,

how conditioning time impacts the accuracy, repeatability, and representativeness of the test. 86 FR 32332, 32342.

Imperial Brown stated that the panel should cure for 30 days before a test specimen is cut and that the test specimen should be tested within 24 hours of being cut. Imperial Brown asserted that conditioning for longer than 24 hours would create an issue with outgassing, particularly on a small test specimen. Additionally, Imperial Brown observed that the 180-day conditioning period specified in ASTM C1029–2015, “Standard Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation” would be unrealistic and a significant test burden. (Imperial Brown, No. 15 at p. 3)

In response to the suggestion by Imperial Brown that a panel should cure for 30 days before a test, DOE notes that section 4.5 of the current test procedure in appendix B already specifies that foam insulation be tested after it is produced in its final chemical form. For foam-in-place insulation, this means the foam has cured as intended and is ready for use in a finished panel. In response to the comments received regarding outgassing of the test specimen for conditioning times beyond 24 hours, preliminary tests conducted by DOE demonstrate negligible change in mass of the test specimen within 24 to 48 hours and negligible difference in R-value when compared to a test specimen from the same foam that was tested within 24 hours. Regarding the 180-day conditioning period specified in ASTM C1029–2015, DOE has tentatively concluded that this timeframe for testing is unrealistic and burdensome. Considering all the information at hand, DOE is not proposing any changes to the current requirement that testing be completed with 24 hours of the test specimen being cut from the envelope component. Correspondingly, DOE is not proposing to reference Section 7.3 of ASTM C518–17 regarding specimen conditioning.

2. Total Insulation and Test Specimen Thickness

Section 4.5 of appendix B currently requires that K-factor of a 1 ± 0.1 -inch sample of insulation be determined according to ASTM C518–04. The walk-in envelope component insulation R-value is determined by dividing the envelope component insulation thickness by the K-factor. As mentioned in the June 2021 RFI, the measurement of total insulation thickness is important in determining the envelope component’s insulation R-value. 86 FR

32332, 32341. As part of the June 2021 RFI, DOE requested comment on how panel thickness is typically measured. *Id.* DOE did not receive any comments in response to this request.

In order to make the test procedure in appendix B more repeatable, DOE is proposing to include instructions for determining both the total insulation thickness as well as the test specimen insulation thickness prior to conducting the test to determine K-factor using ASTM C518–17. DOE is also proposing step-by-step instructions for specimen preparation, including detailed instructions of the number and locations of thickness and area measurements and from where the test specimen should be removed from the overall envelope component. DOE proposes to require the following steps for determining the total thickness of the foam, t_{foam} , from which the final R-value would be calculated:

- The thickness around the perimeter of the envelope component is determined as the average of at least 8 measurements taken around the perimeter, but avoiding the edge region;²³
- The area of the entire envelope component is calculated as the width by the height of the envelope component;
- A sample is cut from the center of the envelope component relative to the envelope component’s width and height. The specimen to be tested using ASTM C518–17 would be cut from the center sample;
- The thickness of the sample cut and removed from the center of the envelope component is determined as the average of at least 8 measurements, with 2 measurements taken in each quadrant;
- The area of the sample cut and removed from the center of the envelope component is determined as the width by the height of the cut sample;
- Any facers on the sample cut from the envelope component shall be removed while minimally disturbing the foam and the thickness of each facer shall be the average of at least 4 measurements;
- The average total thickness of the foam shall then be determined by calculating an area-weighted average thickness of the complete envelope component less the thickness of the facers.

For preparing and determining the thickness of the 1-inch test specimen, DOE proposes to include the following steps:

²³ *Edge region* means a region of the panel that is wide enough to encompass any framing members. If the panel contains framing members (e.g., a wood frame) then the width of the edge region must be as wide as any framing member plus an additional 2 in. ± 0.25 in. See section 3.1 of appendix B.

- A 1 ± 0.1 -inch-thick specimen shall be cut from the center of the cut envelope sample removed from the center of the envelope component;
- Prior to testing, the average of at least nine thickness measurements at evenly-spaced intervals around the test specimen shall be the thickness of the test specimen, L .

Issue 9: DOE requests feedback on the proposed provisions relating to test specimen and total insulation thickness and test specimen preparation prior to conducting the ASTM C518–17 test.

3. Parallelism and Flatness

The test procedure for determining R-value also requires that the two surfaces of the tested sample that contact the hot plate assemblies (as defined in ASTM C518) maintain ± 0.03 inches flatness tolerance and maintain parallelism with respect to one another within a tolerance of ± 0.03 inches.²⁴ See appendix B, section 4.5. As mentioned in the June 2021 RFI, the current test procedure does not provide direction on how flatness and parallelism should be measured or calculated. 86 FR 32332, 32341. As part of the June 2021 RFI, DOE sought comment on how flatness and parallelism are determined by test laboratories and whether the DOE test procedure should include instruction on how to determine these parameters. *Id.* While DOE received no comments in response to this request for comment, DOE believes that accurate and repeatable determination of a specimen’s R-value requires the specimen under test to be both flat and parallel. Therefore, DOE proposes to include the following steps for determining the parallelism and flatness of the tested specimen in appendix B:

- Prior to determining the specimen thickness, the specimen would be placed on a flat surface and gravity will determine the specimen’s position on the surface. As specified previously, a minimum of nine thickness measurements would be taken at equidistant positions on the specimen. These measurements would be associated with side 1 of the specimen.
- The least squares plane of side 1 is determined based on the height measurements taken. The theoretical height of the least squares plane is

²⁴ Maintaining a flatness tolerance means that no part of a given surface is more distant than the tolerance from the “best-fit perfectly flat plane” representing the surface. Maintaining parallelism tolerance means that the range of distances between the best-fit perfectly flat planes representing the two surfaces is no more than twice the tolerance (e.g., for square surfaces, the distance between the most distant corners of the perfectly flat planes minus the distance between the closest corners is no more than twice the tolerance).

determined at each measurement location in the x and y (length and width) direction of the specimen.

- The difference at each measurement location between actual height measurement and theoretical height measurement based on the least squares plane is calculated. The maximum value minus the minimum value is the flatness associated with this side (side 1). In order for each side of the specimen to be considered flat, this value would need to be less than or equal to 0.03 inches.

- Flip the specimen so that side 1 is now on the flat surface and let gravity determine the specimen position on the surface. Repeat the above steps for side 2 of the specimen.

- To determine if each side of the specimen is parallel, the theoretical height at the four corners (*i.e.*, at points (0,0), (0,12), (12,0), and (12,12)) of the specimen must be calculated using the least squares plane. The difference in the maximum and minimum heights would represent the parallelism of one side and would need to be less than or equal to 0.03 inches for the specimen to be considered parallel.

Issue 10: DOE requests feedback on the proposed provisions relating to determining parallelism and flatness of the test specimen.

4. Insulation Aging

In the April 2011 final rule, DOE adopted a test procedure that referenced two industry test standards²⁵ that considered aging of insulation for foams that experience aging. 76 FR 21580, 21588–21592. However, after receiving comments concerning test burden and the availability of labs to conduct the test procedure, DOE re-evaluated its earlier decision and removed this portion of the walk-in panel test procedure in the final rule published May 13, 2014 (“May 2014 final rule”). 79 FR 27388, 27405–27406. Although the current test procedure for determining panel R-value does not account for aging, manufacturers have

raised concern regarding insulation aging and its potential effect on testing results.

“Aging” of foam insulation refers to how diffusion of blowing agents out of the foam and diffusion of air into the foam impacts thermal resistance of insulation materials. The gaseous blowing agents contained in the foam provide the foam with much of its insulating performance, represented by the R-value of the foam material. Because air has a lower insulating value than the blowing agents used in foam insulation, the increased ratio of air to blowing agent reduces the foam insulation performance, which reduces the R-value of the foam material. The building industry uses long-term thermal resistance (“LTTR”) to represent the R-value of foam material over its lifetime by describing the insulating performance changes due to diffusion over time. The presence of impermeable facers on a foam structure may delay the rate of aging or reduce the decrease in R-value when compared to a foam structure that is unfaced or has permeable facers. Blowing agents and temperature and humidity conditions may also affect the amount or rate of aging that occurs in a foam structure.

Since the May 2014 final rule, DOE worked with the Oak Ridge National Laboratory (“ORNL”) to conduct a study on performance aging and thermal bridging of walk-in cooler and freezer panels.²⁶ In this study, multiple panels from five manufacturers were allowed to age intact (*i.e.*, with facers attached) at room temperature, with 1-inch samples taken from the middle of a given panel for testing according to the test procedure in appendix B. These samples were tested upon receipt of the panels and extracted at various times throughout 5 years from intact panels (*i.e.*, with facers attached). Aging panels with their facers attached is representative of how panels are stored and, ultimately, installed for use in a walk-in box. Appendix B does not test

with facers because, as previously stated, the DOE test procedure evaluates only the R-value of the foam insulation—not the R-value of the entire panel.

Based on DOE evaluation of product literature, there are two common ways to manufacture walk-in panels: (1) Foaming metal skins in place using closed cell polyurethane foam (“PUF”) or (2) gluing layers of previously-hardened foam to metal skins. DOE research suggests that PUF is the most common insulation used in walk-ins. To manufacture PUF panels, the PUF is injected and hardened using jigs that firmly maintain exterior panel dimensions until the foam has cooled and hardened. This process encourages standardization of panel dimensions as jigs are expensive and typically have limited adjustability. Extruded polystyrene (“XPS”) is used by some manufacturers to construct walk-in panels. XPS-based walk-ins are built in layers of XPS, a previously-hardened foam material that is shipped in sheets to the original equipment manufacturer (“OEM”), where it is cut to the desired shape and assembled. Customization is more common with XPS panels. XPS strongly resists water absorption, preventing panels from losing their insulative properties should water or condensation leaks develop. Other layered panel assembly materials include polyisocyanurate and expanded polystyrene (“EPS”) which are used less but are still offered by some manufacturers. Polyisocyanurate has similar advantages to XPS, but generally has lower thermal resistivity at lower temperature conditions. EPS also has similar advantages to XPS in terms of moisture absorption, but generally has a lower R-value. The study conducted at ORNL evaluated four panel brands manufactured with PUF and one panel brand manufactured using XPS. The R-value of insulation measured by ORNL at the initial test date and most recent test date are summarized in Table III.5.

TABLE III.5—SUMMARY OF R-VALUE TEST RESULTS AT INITIAL TEST DATE AND MOST RECENT TEST DATE FROM ORNL STUDY

Label	Foam type	Temperature condition	Number of years after initial test	R-value
F1	PUF	Freezer	0 (initial test)	31.2
			2.3	30.9
F2	PUF	Freezer	0 (initial test)	31.8
			4.2	30.3

²⁵ DOE referenced DIN EN 13164:2009–02, “Thermal insulation products for buildings—Factory made products of extruded polystyrene foam (XPS)—Specification” and DIN EN 13165:2009–02, “Thermal insulation products for buildings—Factory made rigid polyurethane foam (PUR) products—Specification.”

²⁶ A presentation on ORNL’s study can be found online at <https://www.osti.gov/biblio/1844325-impact-thermal-bridging-imperfections-aging-effective-value-walk-cooler-freezer-panels>. DOE acknowledges that panels are shipped for assembly in walk-ins with the foam already in final chemical form between facers. Thus, the most applicable

evaluation of change in insulation R-value over time is demonstrated by the red data points (labeled “2”) for the foam that remained intact with the facers on slides 26 through 30 of ORNL’s presentation.

TABLE III.5—SUMMARY OF R-VALUE TEST RESULTS AT INITIAL TEST DATE AND MOST RECENT TEST DATE FROM ORNL STUDY—Continued

Label	Foam type	Temperature condition	Number of years after initial test	R-value
C1	PUF	Cooler	0 (initial test)	28.2
			4.8	26.8
C2	XPS	Cooler	0 (initial test)	25.0
			4.7	23.1
C3	PUF	Cooler	0 (initial test)	28.0
			0.5	27.8

Based on ORNL's study, DOE considers the effects of foam insulation aging for walk-in refrigeration panels sold with facers to be minimal when panel facers remain attached to the foam (*i.e.*, when the panel remains intact.). DOE understands that for the purposes of certification and represented R-values, manufacturers are determining their represented R-value by testing specimens from panels at the point of manufacture (*i.e.*, R-value without aging). For assessment and enforcement testing conducted to support the enforcement of DOE's energy conservation standards, DOE is generally able to test samples within one to three months after receipt. The time lag from when the panel is manufactured and when testing is conducted at a lab is typically significantly shorter than that evaluated in the ORNL study; therefore, DOE expects any reduction in R-value to be even less during the period from date of manufacture to assessment or enforcement test date. Additionally, walk-in panels received by DOE for assessment and enforcement testing are evaluated upon arrival to ensure that they are received intact (*i.e.*, with facers) and undamaged and testing of the specimen is completed within 24 hours of sample removal from the panel, as specified in section 4.5 of the DOE test procedure in appendix B. DOE does not expect any reduction in R-value within 24 hours of the sample being cut from the panel.

Issue 11: DOE seeks comment on other comparable data or studies of aging of foam panels that are representative of the foam insulation, blowing agents, and panel construction currently used in the manufacture of walk-in panels. DOE also requests comment on whether manufacturers have been certifying R-value at time of manufacture or after a period of aging.

5. Determining Energy Consumption of Panels That Are Not Display Panels

When DOE initially established the test procedures for components of a WICF in its April 2011 final rule, DOE adopted a test method for measuring the

overall thermal transmittance of a walk-in panel, including the impacts of thermal bridges²⁷ and edge effects (*e.g.*, due to framing materials and fixtures used to mount cam locks). 76 FR 21580, 21605–21612. This method was based on an existing industry test method, incorporating by reference ASTM C1363. *Id.* However, after receiving comments concerning test and cost burden and the lack of availability of labs to conduct the test procedure, DOE re-evaluated its earlier decision and removed this portion of the walk-in panel test procedure in the May 2014 final rule. 79 FR 27388, 27405–27406. As previously stated, the current test procedure in appendix B for non-display panels evaluates insulation R-value according to ASTM C518–04. In the June 2021 RFI, DOE requested information regarding panel construction factors that would affect overall thermal transmission and the magnitude of these effects. 86 FR 32332, 32342. DOE also requested comment on alternative test methods to measure overall thermal transmittance of a panel assembly along with the number of labs that are qualified to run ASTM C1363. *Id.*

ASAP and the CA IOUs encouraged DOE to consider a test method that captures overall thermal transmittance of walk-in panels. (ASAP, No. 13 at p. 2; CA IOUs, No. 14 at p. 5) The CA IOUs specifically recommended that the ASTM C1363 test be conducted on a wall panel assembly that includes the panel joint to ensure the joint locking mechanism does not significantly affect the thermal conductance of the assembly. The CA IOUs also suggested that the tested joint assembly use a manufacturer-recommended sealant representative of field installation. (CA IOUs, No. 14 at p. 5)

Imperial Brown urged DOE to maintain the current test procedure for non-display panels based on insulation R-values determined using ASTM C518. Imperial Brown stated that ASTM

C1363 is unduly burdensome given the custom nature of the walk-ins they manufacture and that this would substantially increase their testing requirements. Imperial Brown also remarked that the effect of panel edges or accessories is of little value to the overall energy consumption of a walk-in and that considering these effects would be equivalent to considering one opening of the walk-in door per day. Specifically, Imperial Brown stated that the panel edges and accessories are not considered when calculating box loads and sizing refrigeration equipment because they do not consider them to be an important factor in heat loss. Imperial Brown also stressed that retesting will be required every few years as they switch to different insulation chemicals to comply with other regulations coming into effect (*e.g.*, the Environmental Protection Agency ("EPA") phasedown of HFCs. (Imperial Brown, No. 15 at p. 3)

NFRC stated that all labs qualified to run NFRC 102 are qualified to run ASTM C1363 and that there are currently ten labs accredited by NFRC to run NFRC 102, and thus ASTM C1363. (NFRC, No. 10 at p. 4)

While commenters indicated that there are more laboratory facilities now able to conduct an overall U-factor test procedure, the concerns previously expressed regarding cost and test burden, which led to the removal of this test procedure in the May 2014 AEDM final rule (79 FR 27388, 27405–27406), remain. At this time, DOE is not proposing to include a test procedure for determining energy consumption of non-display panels and is proposing to maintain the R-value of insulation test procedure in appendix B with the proposed amendments as described previously in sections III.E.1 through III.E.4.

F. Proposed Amendments to Subpart R, Appendix C, to Determine Compliance With the Current Energy Conservation Standards

Subpart R, appendix C, provides the test procedures to determine the AWEF and net capacity of walk-in refrigeration

²⁷ Thermal bridging occurs when a more conductive material allows an easy pathway for heat flow across a thermal barrier.

systems. DOE is proposing to modify subpart R, appendix C, to improve test representativeness and repeatability. Specifically, DOE is proposing to make the following revisions to subpart R, appendix C: (1) Specify refrigeration test room conditions; (2) provide for a temperature probe exception for small diameter refrigerant lines; (3) incorporate a test setup hierarchy for laboratories to follow when setting up a unit for test; (4) allow active cooling of the liquid line in order to achieve the required 3 °F subcooling at a refrigerant mass flow meter; and (5) modify instrument accuracy and test tolerances.

DOE does not expect that the changes it is proposing in this section would alter measured capacity values or AWEF—which means that no retesting or recertification would be required. Rather, the revisions proposed for subpart R, appendix C, address repeatability issues that DOE has observed through its testing of walk-in refrigeration systems.

The following sections describe the modifications that DOE is proposing to subpart R, appendix C.

1. Refrigeration Test Room Conditioning

The DOE test procedure for walk-in refrigeration systems has requirements for test chambers to be at specific temperature and/or humidity conditions. (See, e.g., Tables 3 through 16 of AHRI 1250–2009, which is incorporated by reference in the DOE test procedure) Section C6.2 of AHRI 1250–2009 appendix C requires that the environmental chambers “be equipped with essential air handling units and controllers to process and maintain the enclosed air to any required test conditions.” This same requirement is in Section C5.2.2 of AHRI 1250–2020. However, DOE is aware that some test facilities rely on the test unit to cool and dehumidify the test room, in some cases without support from additional chamber conditioning systems. When unit coolers with hot gas defrost are tested and certified alone, these unit coolers may be paired with a condensing unit at a test facility that lacks hot gas capability and would be unable to remove the frost accumulated during pretest conditioning. Such frost would affect the results of the capacity test.

DOE proposes to specify that for applicable system configurations (matched pairs, single-packaged systems, and unit coolers tested alone), the unit under test may be used to aid in achieving the required test chamber conditions prior to beginning any steady state test. However, the unit under test must be inspected and confirmed to be

free from frost before initiating steady state testing. This additional instruction reflects DOE’s understanding of the existing practice followed by manufacturers and third-party laboratories who use the unit under test to establish the required chamber conditions. The proposed inspection requirement would ensure that a steady state test is not started with frost on the coil. Starting a test with a frosted coil would likely lead to reduced-efficiency and non-representative test results, and DOE expects that test laboratories would have no incentive to conduct tests with a frosted coil.

Issue 12: DOE requests comment on the proposed pretest coil inspection requirement. DOE requests comment on whether the proposed approach is inconsistent in any way with the way units under test are used to assist in chamber conditioning by testing facilities, and if so, in what way are the proposals inconsistent, and how could they be changed to align with this practice.

2. Temperature Measurement Requirements

The current DOE test procedure requires all refrigerant temperature measurements entering or leaving the unit cooler be measured by a “temperature measuring instrument placed in a thermometer well and inserted into the refrigerant stream. These wells shall be filled with non-solidifying, thermal conducting liquid or paste to ensure the temperature sensing instrument is exposed to a representative temperature.” AHRI 1250–2009 appendix C, Section C3.1.6. These temperature measurements are used to determine refrigerant enthalpy as part of the capacity measurement for matched pairs and unit coolers tested alone (see AHRI 1250–2009, Section C8.5.1, Equations C1 and C2). However, the capacity determination for dedicated condensing units tested alone is based on the refrigerant conditions leaving the condensing unit and standardized conditions leaving the unit cooler, as specified in section 3.4.2.1 of subpart R, appendix C. DOE believes that the added accuracy provided by immersing the temperature sensor in the refrigerant or by the thermometer wells should be applied for the temperature measurement used in the capacity calculation. Hence, DOE proposes that the test procedure provide clarification that when testing dedicated condensing units, the use of thermometer wells or immersed sensors be used only at the condensing unit liquid outlet. DOE believes this may reduce testing burden in cases where labs have been using two

sets of refrigerant-immersed temperature measurements when testing dedicated condensing units alone.

Issue 13: DOE requests comment on its proposal to require use of thermometer wells or sheathed sensors immersed in the refrigerant when measuring temperature at the liquid outlet of the condensing unit and to forego the requirement for this measurement technique for the suction line when testing a dedicated condensing unit alone.

DOE has found that implementing the current thermometer well requirement for refrigerant lines with outer diameter 1/2-inch or less can restrict the refrigerant flow and thus affect the measurements. To rectify this issue and to ensure that all walk-in refrigeration systems can be tested according to the DOE test procedure, DOE proposes allowing an alternative approach when the refrigerant line tubing diameter is 1/2-inch or less in which the temperature measurement would be made using two surface-mounted measuring instruments with a minimum accuracy of ± 0.5 °F, which would be averaged to obtain the reading. DOE notes that when using the Dual Instrumentation method described in Section C8 of AHRI 1250–2009 appendix C, the two surface measurements described would constitute one temperature measurement, rather than the two measurements required for the test method. Additionally, DOE proposes that the two measuring instruments must be mounted on the pipe separated by 180-degrees around the refrigerant tube circumference. To ensure measurements are not affected by changes in ambient temperature, DOE proposes requiring use of 1-inch-thick insulation around the measuring instruments that extends 6-inches up- and down-stream of the measurement locations. Where this technique is used to measure temperature at the expansion valve inlet, i.e., where Section C3.16 of AHRI 1250–2009 requires the measurement to be within 6 pipe diameters of the control device, DOE proposes to relax this requirement and require instead that the measurement be within 6 inches of the device.

Issue 14: DOE requests comment on its proposal to allow the use of two temperature measuring instruments, placed on the outside of refrigerant tubing that is less than or equal to 1/2-inch, for the measurement of refrigerant temperature where the current test procedure requirement is to use thermometer wells or a sheathed sensor immersed in the refrigerant.

3. Hierarchy of Installation Instructions and Specified Refrigerant Conditions for Refrigerant Charging and Setting Refrigerant Conditions

During testing, DOE has found that some refrigeration systems cannot be set up fully consistent with the refrigerant conditions specified in installation instructions. In some cases, there may be multiple installation instructions (e.g., instructions on labels affixed to the unit and instructions shipped with the unit), and different results could be obtained depending on which instructions are followed. To address this issue, DOE has developed a setup hierarchy for installation instructions and setup of refrigerant conditions to improve repeatability in testing by indicating which manufacturer-specified conditions would be prioritized during test setup. DOE's proposed setup hierarchy is discussed in more detail in the following paragraphs.

Setup conditions or instructions may be stamped on the unit nameplate or otherwise affixed to the unit, shipped with the unit, or available online. DOE has encountered walk-in refrigeration units for which these three sources of instruction provide different values or conflicting directions. To ensure consistent setup during testing, DOE proposes that instructions or conditions stamped on or adhered to a test unit take precedence, followed by instructions shipped with the unit. Additionally, since online instructions can be easily revised, DOE proposes that instructions or other setup information found online would not be used to set up the unit for test.

Setting of refrigerant charge level or refrigerant conditions is a key aspect of setup of refrigeration systems, whether for field use or testing. DOE proposes that units be charged and set up at operating conditions specified in the test procedure (for outdoor refrigeration systems, DOE proposes use of operating condition A) based on the installation instructions, using the proposed hierarchy (i.e., prioritize instructions stamped or adhered to unit over instructions included in a manual shipped with the unit). In the case where instructions for refrigerant charging or refrigerant conditions are provided only in online instructions or not at all, DOE is proposing that a generic charging approach be used instead. If the installation instructions specify operating conditions to use to set up the refrigerant charge or refrigerant conditions, that operating condition would be used rather than the

conditions specified in the test procedure.

DOE often finds that in some cases, the manufacturer specifies a range of conditions for superheat,²⁸ subcooling, and/or refrigerant pressure. If this is the case, DOE proposes to treat the midpoint of that range as the target temperature/pressure, and that a test condition tolerance would be applied to the parameter that is equal to half the range. For example, if a manufacturer specifies a target superheat of 5 to 10 °F, the target for test would be 7.5 °F and that the average value during operation at the setup operating conditions would have to be 7.5 °F ± 2.5 °F. Alternatively, installation instructions may specify a refrigerant condition value without a range or without indicated tolerances. In such cases, DOE proposes that standardized tolerances be applied as indicated in Table III.6. These tolerances depend on the kind of refrigerant expansion device used.

DOE also notes that zeotropic²⁹ refrigerants have become more common. When charging with such refrigerants (i.e., any 400 series refrigerant), DOE proposes that the refrigerant charged into the system must be in liquid form. This is standard practice for charging of such refrigerants since the concentrations of the components of the blend present in the vapor phase of the charging cylinder are often skewed from the intended concentrations of the refrigerant blend.

If the installation instructions on the label affixed to (or shipped with) the unit do not provide instructions for setting subcooling or otherwise how to charge it with refrigerant for a condensing unit tested alone, or tested as part of a matched pair, DOE proposes requiring that the unit be tested in a way that is consistent with the DOE test procedure and the installation instructions and also does not cause the unit to stop operating during testing, e.g., by shutoff by the high pressure switch. DOE believes that such installation would be most representative of the way a technician would set up a system in the field if there were no refrigerant charge or subcooling instructions.

a. Dedicated Condensing Unit Charging Instructions

For dedicated condensing units tested alone, subcooling is the primary setup

²⁸ Superheat is the difference between vapor-phase refrigerant temperature and the dew point corresponding to the pressure level.

²⁹ A zeotropic refrigerant is a blend of two or more refrigerants that have different boiling points. Each refrigerant will evaporate and condense at different temperatures.

condition. DOE is proposing that if the dedicated condensing unit includes a receiver and the subcooling target leaving the condensing unit provided in the installation instructions cannot be met without fully filling the receiver, the subcooling target would be ignored. Likewise, if the dedicated condensing unit does not include a receiver and the subcooling target leaving the condensing unit cannot be met without the unit cycling off on high pressure, the subcooling target would be ignored. Also, if no instructions for charging or for setting subcooling leaving the condensing unit are provided in the installation instructions, DOE is proposing that the refrigeration system would be set up with a charge quantity and/or exit subcooling such that the unit operates during testing without shutdown (e.g., on a high-pressure switch) and operation of the unit is otherwise consistent with the requirements of the test procedure and the installation instructions.

b. Unit Cooler Charging Instructions

For unit coolers tested alone, superheat is the primary setup condition. Most WICF refrigeration systems use either thermostatic or electronic expansion valves that respond either mechanically or through a controller to adjust valve position to control for superheat leaving the unit cooler. If the unit under test is shipped with an adjustable expansion device, DOE proposes that this would be the primary method to adjust superheat. However, DOE has encountered units with expansion devices that are not adjustable or where the expansion device does not provide a sufficient range of adjustment to achieve the superheat target. If the expansion valve associated with the unit under test reaches its limit before the superheat target is met, the specified superheat may not be met within the specified tolerance. In this case, DOE proposes that the expansion valve should be left at the adjustment limit achieving the closest match to the superheat target.

DOE has also encountered mismatched expansion devices and unit coolers. In this situation, DOE proposes that any expansion device specified for use with the unit cooler in manufacturer literature may be used for the purposes of DOE testing.

Also, DOE proposes that an operating tolerance would not apply to superheat. Hence, in the event that the expansion valve control of the systems is not steady, i.e., if so-called "hunting" occurs, in which the valve position, temperatures, and/or pressures are unsteady, this fluctuation would not

invalidate a test. However, if the fluctuations are so great that a valid test cannot be performed (*i.e.*, any individual measurement of superheat during the test is zero or less, or if the operating tolerances for measurements that would be affected by expansion device hunting are exceeded (mass flow, pressure at the unit cooler exit, evaporator temperature difference),³⁰ the test procedure would call for remedial action allowing deviation from the installation instructions. The remedial action would be, at the discretion of the test laboratory, replacing the expansion device with a different expansion device that does not need to be listed in installation instructions, adjusting the expansion device to provide an average superheat that is greater than the target superheat, or both.

If the installation instructions on the label affixed to the unit or shipped with the unit do not provide instructions for setting superheat for a unit cooler tested alone or tested as part of a matched pair, DOE proposes that the target superheat would be 6.5 °F, the same value required in such circumstances in AHRI 1250–2020 (see footnotes to Tables 16 and 17 of AHRI 1250–2020).

c. Single-Packaged Dedicated System Setup and Charging Instructions

DOE has identified multiple setup issues while testing single-packaged dedicated systems. Compared to split refrigeration systems,³¹ single-packaged dedicated systems have less adjustment flexibility due to lack of controls. Additionally, many single-packaged

dedicated systems are marketed as “fully charged”; therefore, it could be assumed that the charge would not need to be adjusted.

DOE proposes that one or more pressure gauges, depending on the number of conditions which require a pressure measurement for validation, should be installed during the setup according to installation instructions to evaluate the charge of the unit under test and to accurately measure setup conditions. The location of the pressure gauge(s) would depend on the test setup conditions given in the installation instructions. If charging is based on subcooling or liquid pressure, DOE proposes that the pressure gauge would be installed at the service valve of the liquid line. If charging is based on superheat, low side pressure, or a corresponding saturation temperature/dew point temperature, DOE proposes that the pressure gauge(s) would be placed in the suction line.

DOE is aware that installation instructions for some single-packaged dedicated systems recommend against installing charging ports; however, DOE has observed through testing that some of these units do not operate once installed due to high- or low-pressure compressor cut off, which is often a symptom of under- or over-charging or refrigerant loss. These units are representative of what a contractor would encounter when installing a walk-in single-packaged unit in the field. Therefore, in cases where a unit under test is not operating due to high- or low-pressure compressor cut off, DOE proposes a charging port should be

installed, the unit should be evacuated, and the nameplate charge should be added. This approach would eliminate under- or over-charging of the unit which would address compressor cut off.

d. Hierarchy of Setup Conditions if Manufacturer-Specified Setup Conditions Cannot be Met

In DOE’s experience, even when all the previously discussed measures are implemented during test setup, some manufacturer specified setup conditions may not be met. If this is the case, DOE is proposing that the unit under test be set up according to a hierarchy of conditions similar to those used for central air-conditioning systems and heat pumps. First, the installation instruction hierarchy previously discussed would be applied. Specifically, if a refrigerant-related setup instruction in the installation instructions affixed to the unit and a different instruction in the installation instructions shipped with the unit cannot both be achieved within tolerance, the instruction on the label takes precedence. Further, if multiple instructions within the relevant installation instructions cannot be met, the proposed hierarchy outlined in Table III.6 would be applied. The highest priority condition that can be satisfied, based on Table III.6, would need to be met, depending on what kind of expansion device the system uses. This approach would ensure that units are set up consistently across testing facilities, ensuring more consistent results.

TABLE III.6—TEST CONDITION TOLERANCES AND HIERARCHY FOR REFRIGERANT CHARGING AND SETTING OF REFRIGERANT CONDITIONS

Fixed orifice or capillary tube			Expansion valve		
Priority	Method	Tolerance	Priority	Method	Tolerance
1	Superheat	±2.0 °F	1	Subcooling	10% of the Target Value; No less than ±0.5 °F, No more than ±2.0 °F.
2	High Side Pressure or Saturation Temperature.	±4.0 psi or ±1.0 °F	2	High Side Pressure or Saturation Temperature.	±4.0 psi or ±1.0 °F.
3	Low Side Pressure or Saturation Temperature.	±2.0 psi or ±0.8 °F	3	Superheat	±2.0 °F.
4	Low Side Temperature	±2.0 °F	4	Low Side Pressure or Saturation Temperature.	±2.0 psi or ±0.8 °F.
5	High Side Temperature	±2.0 °F	5	Approach Temperature	±1.0 °F.
6	Charge Weight	±2.0 oz	6	Charge Weight	0.5% or 1.0 oz, whichever is greater.

³⁰ Evaporator Temperature Difference (TD) is the difference in temperature between the entering air and the refrigerant dew point of the exiting refrigerant.

³¹ “Split refrigeration systems” refer to systems made up of a condensing unit and a unit cooler that are connected by refrigerant lines and are not contained in a single housing. Split refrigeration

systems could be field-matched condensing units and unit coolers or condensing units and unit coolers sold as matched pairs.

Issue 15: DOE requests comment on its proposals discussed in this section regarding set up of walk-in refrigeration systems for testing to achieve manufacturer-specified conditions for superheat, subcooling, high-side temperature, pressure or saturation temperature, low-side temperature, pressure or saturation temperature, and refrigerant charge weight. Additionally, DOE requests comment on the proposed hierarchy presented in Table III.6, if a laboratory has confirmed that the unit is properly charged.

4. Subcooling Requirement for Mass Flow Meters

DOE has found that for testing dedicated condensing units alone an appropriate subcooling temperature ensures that the refrigerant is fully liquid at the mass flow meter, providing an accurate measurement. A mass flow meter may provide an inaccurate flow rate if the refrigerant is a mixture of vapor and liquid at the point of measurement. Section C3.4.5 of AHRI 1250–2009 appendix C requires that refrigerant be subcooled to at least 3 °F and that bubbles not be visible in a sight glass immediately downstream of the mass flow meter. Section 3.2.3 of subpart R, appendix C, allows use of the sight glass and a temperature sensor located on the tube surface under the insulation to verify sufficient subcooling. DOE testing has also shown that even when the subcooling requirement is met downstream of the mass flow meters, the subcooling can be significantly lower upstream of the mass flow meters, resulting in questionable mass flow measurements that do not provide capacity determinations within the required tolerances, *e.g.*, with 5 percent of each other as required by Section C8.5.3 of AHRI 1250–2009 (*see* EERE–2017–BT–TP–0010–0021, “Development of Test Rating Conditions for Two-Capacity, Multiple-Capacity, and Variable-Capacity Condensing Units”). DOE proposes to add further instruction to section 3.2.3 of subpart R, appendix C.

First, DOE proposes that the 3 °F subcooling requirement be applied at a location depending on location of the liquid-line mass flow meters. Specifically, the requirement would apply downstream of any mass flow meter located in the chamber in which the condensing unit under test is located, consistent with AHRI 1250–2009. However, for mass flow meters located in the chamber in which the unit cooler under test is located, the subcooling would have to be verified upstream of the mass flow meter. The latter requirement addresses observation

in DOE testing that the upstream subcooling is less than the downstream subcooling when the mass flow meter is in the same chamber as the unit cooler. *Id.* This occurs because the unit cooler chamber is generally much cooler than the liquid refrigerant.³² Since mass flow meters are rarely insulated, the liquid refrigerant is cooled as it passes through the mass flow meter, which increases the refrigerant’s subcooling. However, as the liquid refrigerant passes through the mass flow meter it also experiences a pressure drop which decreases the subcooling. The increase in subcooling that occurs across the mass flow meter is nearly always larger than the decrease in subcooling that occurs because of the pressure drop across the mass flow meter. Therefore, subcooling will nearly always be less at the inlet of a mass flow meter than at the outlet. This is in contrast to a mass flow meter located in the same chamber as the condensing unit, for which the air surrounding the mass flow meter, while typically cooler than the liquid, would be much closer in temperature to the liquid temperature.³³ DOE also notes that the requirement for subcooling specified in ASHRAE 23.1–2010, which is incorporated by reference by the DOE test procedure for testing of condensing units alone, indicates in section 7.1.2 (“Adequate subcooling shall be provided upstream of a liquid refrigerant flowmeter . . .”) suggesting that there is a lack of clarity regarding the best location for ensuring adequate subcooling. Based on DOE’s experience and the prevailing air-liquid temperature differences during testing, DOE proposes to include the clarification above regarding the location of the subcooling verification.

Second, DOE proposes to indicate that active cooling of the liquid line may be used to achieve the required subcooling, since the subcooling at the mass flow meter outlet may not meet the 3 °F requirement when the subcooling at the condensing unit exit is within tolerance of its target. However, DOE also proposes requiring that if this is done when testing a matched pair (not including single-packaged dedicated systems), that the temperature also must

be measured upstream of the location where cooling is provided, and that the temperature used to calculate the enthalpy of the refrigerant entering the unit cooler be increased by the difference between the upstream and downstream measurements. DOE is proposing this adjustment so that active cooling of the liquid to obtain a mass flow measurement does not provide a non-representative boost in calculated cooling capacity.

DOE proposes to add these requirements to subpart R, appendix C, which would also carry over to the newly proposed subpart R, appendix C1.

Issue 16: DOE requests comments on its proposal to clarify the location where the 3 °F subcooling requirement would apply and to require active cooling of the liquid line in order to achieve the required 3 °F subcooling at a refrigerant mass flow meter. DOE also seeks comment on its proposal to require, for matched pairs, adjustment of the measured unit cooler inlet temperature by the difference in temperatures measured upstream and downstream of the active cooling in order to calculate the inlet enthalpy in the capacity calculation.

5. Instrument Accuracy and Test Tolerances

As discussed in section III.B.3.a, AHRI 1250–2020 has adopted language from the current DOE test procedure covering test tolerances and instrumentation accuracy. Additionally, as discussed in section III.B.3.d, some tolerances and instrumentation accuracy requirements in AHRI 1250–2020 are not consistent with the current DOE test procedure. DOE is proposing to adopt these changes from AHRI 1250–2020 into subpart R, appendix C, as DOE has tentatively determined these changes would not have an effect on measured values.

AHRI 1250–2020 changes the measurement accuracy for the temperature of air entering or leaving either the evaporator or condenser to ± 0.25 °F from ± 0.2 °F in AHRI 1250–2009. DOE notes that ± 0.25 °F is the standard minimum accuracy across many Heating, Ventilation and Air-Conditioning (“HVAC”) testing standards. Since AHRI 1250–2020 references ASHRAE 37–2009 for single-packaged testing, it simplifies the test procedure to have the same instrument accuracy requirements across both standards. In addition, providing a consistent minimum accuracy across test procedures reduces laboratory test burden and DOE expects it may benefit a laboratory’s quality control. DOE is

³² For example, when testing a matched pair refrigerator system under test condition A, the condensing unit chamber air temperature is at 95 °F and the unit cooler chamber air is at 35 °F. The liquid refrigerant generally is warmer than the condensing unit ambient temperature. Hence, there is at least a 60 °F temperature difference between the unit cooler inlet air temperature and the liquid refrigerant temperature.

³³ For the same example, the liquid temperature may be in the range roughly from 95 °F to 105 °F, at most about 10 °F warmer than the surrounding air.

proposing that the temperature measurement of air entering or leaving either the compressor or evaporator would have a minimum accuracy of $\pm 0.25^\circ\text{F}$. DOE does not expect this modification to have a significant impact on measured values. Additionally, the proposed tolerance is greater than the current tolerance and therefore if adopted it would not require manufacturers to retest. DOE does not expect that the changed tolerance would impact the representativeness of the results. As noted, the proposed tolerance is that generally used for HVAC systems.

As discussed in section III.B.3.d, AHRI 1250–2020 does not reference ASHRAE 23 or AHRI 420 for the testing of dedicated condensing units and unit coolers, respectively. As such, the ASHRAE 23 refrigerant mass flow operating tolerance of \pm one percent of the quantity measured has been replaced in Table 2 of AHRI 1250–2020 by an operating tolerance of 3 pounds per hour (“lb/h”) or 2 percent of the reading (whichever is greater). DOE notes that the requirement for a one percent mass flow tolerance posed challenges for test labs when at very low flow rates (near 0 lb/h). Specifically, as mass flow approaches 0 lb/h, the acceptable deviation from the average also approaches zero resulting in an unrealistic accuracy target. This issue would not occur with the minimum accuracy provided in AHRI 1250–2020 because the acceptable deviation from the average must be within ± 3 lb/h if the variation is less than 2 percent of the mass flow reading. As such, DOE is proposing to adopt the mass flow tolerance specified in Table 2 of AHRI 1250–2020 into subpart R, appendix C. DOE does not expect that this modification would have a significant impact on capacity and AWEF values, and therefore would not require retesting or recertification.

6. CO₂ Unit Coolers

All refrigerants have a “critical pressure” and an associated “critical temperature” above which liquid and vapor phases cannot coexist. Above this critical point, the refrigerant will be a gas and its temperature will increase or decrease as heat is added or removed. For all conventional refrigerants, the critical pressure is so high that it is never exceeded in typical refrigeration cycles. For example, R404A is a common refrigerant used in refrigeration systems that has a critical pressure of

540.8 psia³⁴ with an associated critical temperature of 161.7°F . However, CO₂ behaves differently, with a critical pressure of 1,072 psia associated with a lower critical temperature of 87.8°F . The refrigerant temperature must be somewhat higher than the ambient temperature in order to reject refrigeration cycle heat to the ambient environment. Ambient temperatures greater than 87.8°F are common and the performance of many refrigeration and air conditioning systems are tested using a 95°F ambient temperature, as indicated by the A test condition in Section 5 of AHRI 1250–2009 (and AHRI 1250–2020). At temperatures greater than the critical temperature, the CO₂ refrigerant is in a supercritical state (*i.e.*, a condition with pressure above the critical temperature). Since useful cooling is provided below the critical temperature, CO₂ cycles are said to be transcritical.

DOE has granted test procedure waivers to the manufacturers listed in Table III.1 for certain basic models of walk-in refrigeration systems that use CO₂ as a refrigerant. Manufacturers requesting a waiver from the DOE test procedure for CO₂ unit coolers stated that the test conditions described in Tables 15 and 16 of AHRI 1250–2009, as incorporated by subpart R, appendix C, with modification, cannot be achieved by, and are not consistent with the operation of, CO₂ direct expansion unit coolers. These manufacturers also specified that CO₂ has a critical temperature of 87.8°F , and therefore the required liquid inlet saturation temperature of 105°F and the required liquid inlet subcooling temperature of 9°F as specified in the DOE test procedure are not achievable. The alternate test procedure provided in these waivers modifies the test condition values to reflect typical operating conditions for a transcritical CO₂ booster system. Specifically, the waiver test procedures require that CO₂ unit cooler testing is conducted at a liquid inlet saturation temperature of 38°F and a liquid inlet subcooling temperature of 5°F . CO₂ that is cooled in the gas cooler of a transcritical booster system expands through a high-pressure control valve that delivers CO₂ to a subcritical-pressure flash tank, where liquid and vapor phases of the refrigerant are separated. The liquid is then split, and the unit cooler, regardless of refrigerated storage space temperature, receives the refrigerant at

the same condition. This applies to both medium- and low-temperature systems.

In the June 2021 RFI, DOE requested comment on whether the test conditions provided in the waivers are appropriate and if there are additional modifications that could more accurately evaluate the energy use of these systems while minimizing test burden. 86 FR 32332, 32346. Lennox, AHRI, National Refrigeration, and Hussmann recommended that DOE use the conditions provided in the waivers for CO₂ unit coolers. (Lennox, No. 9 at p. 7; AHRI, No. 11 at p. 12; National Refrigeration, No. 17 at p. 1; Hussmann, No. 18 at p. 14)

In the June 2021 RFI, DOE also requested comment on the present and future expected use of CO₂ systems and information about such systems that would suggest a need to modify the DOE test procedure. 86 FR 32332, 32346. Lennox, AHRI, and Hussmann stated that some CO₂ units, not available in the U.S., may supply subcritical liquid or supercritical gas at the expansion valve, while some condensing units with integrated expansion valves supply two-phase CO₂ to evaporators. (Lennox, No. 9 at pp. 7–8; AHRI, No. 11 at pp. 12–13; Hussmann, No. 18 at p. 14) For units where the CO₂ leaving the condensing unit is supercritical or two-phase, Lennox, AHRI, and Hussmann recommended setting temperature *and* pressure conditions; for condensing units providing subcritical liquid to unit cooler expansion devices, these stakeholders suggested that the test method provided in the waivers should be used. (Lennox, No. 9 at p. 8; AHRI, No. 11 at p. 13; Hussmann, No. 18 at p. 14) Lennox, AHRI, and Hussmann additionally stated that while CO₂ condensing units with a single compression stage and conventional HFC units can be tested using the same method, an intermediate pressure that is the same as the liquid supply conditions in the waiver test procedures must be specified for units with two stages of compression. *Id.* Lennox recommended evaluating the potential energy savings of CO₂ units to see if additional changes are warranted. (Lennox, No. 9 at p. 7) The CA IOUs suggested that DOE differentiate AWEF ratings of units using CO₂ and units using traditional refrigerants. (CA IOUs, No. 14 at p. 4) Additionally, the CA IOUs urged DOE to ensure that the walk-in test procedures and metrics continue to provide consumers with the information necessary to easily compare the performance of products with the same utility. *Id.*

DOE acknowledges that a goal of its test procedures is to provide purchasers

³⁴ Absolute pressure is the pressure measured relative to a complete vacuum; “psia” represents the absolute pressure in pounds per square inch.

with an energy use metric that is consistent across products that provide similar utility. In response to the comment by Lennox, DOE would evaluate the potential energy savings of CO₂ units as part of a separate, future energy conservation standards rulemaking. DOE investigation confirms that there are no known sales of CO₂ dedicated condensing units in the U.S. The only relevant CO₂ system architecture in the U.S. appears to be CO₂ booster systems using unit coolers operating with conditions consistent with the waivers.

DOE also evaluated if the current AWEF calculation for unit coolers tested alone could be applied to CO₂ unit coolers. The current calculation uses an EER to determine the representative compressor power consumption. The EER values used are in Table 18 of AHRI 1250–2020 and are based on typical traditional refrigerant compressor efficiency. DOE has tentatively determined that the EER values used for the AWEF calculations of traditional unit coolers can also be used for CO₂ unit coolers. DOE research into the performance of different configurations of CO₂ booster systems shows that enhanced CO₂ cycles can match conventional refrigerants in average annual efficiency. These data and studies help to justify the use of the EER values in Table 18 of AHRI 1250–2020 for determining the power consumption of CO₂ booster system unit coolers, even though these EER values were initially established for conventional refrigerants.

In this NOPR, DOE is proposing to adopt in subpart R, appendix C (and also appendix C1), the alternate test conditions specified in the waivers that DOE granted for CO₂ transcritical unit coolers for all CO₂ unit coolers. Also, consistent with the waiver alternate test procedures, DOE proposes that the established EER values be used to determine compressor power found in Table 17 of AHRI 1250–2009 (or Table 18 of AHRI 1250–2020 for appendix C1) would be used to determine the AWEF of all CO₂ unit coolers.

Issue 17: DOE requests comment on the appropriateness of traditional refrigerant compressor EER values for use in CO₂ unit cooler AWEF calculations.

7. High-Temperature Unit Coolers

As discussed in the June 2021 RFI, DOE is aware of wine cellar (high-temperature) refrigeration systems that fall within the walk-in definition but that may be incapable of being tested in a manner that would yield representative performance results

during a representative average use cycle under the current version of the walk-in test procedure. 86 FR 32332, 32344. For example, wine cellar refrigeration systems that may be installed in some commercial settings are designed to operate at a temperature range of 45 °F to 65 °F.

High-temperature refrigeration systems are discussed generally in section III.G.6. Most of these refrigeration systems are either a single-packaged dedicated system or a matched pair. However, DOE has also received a petition for waiver for high-temperature unit coolers that are distributed into commerce without a paired condensing system.³⁵ These unit cooler-only models would be tested according to the provisions in the test procedure for unit coolers tested alone, for which calculation of AWEF requires use of an appropriate EER based on the suction dew point temperature. Table 17 in AHRI 1250–2009 provides EER values for medium- and low-temperature unit coolers tested alone. However, DOE has tentatively determined that these values are not appropriate for calculating AWEF for high-temperature unit coolers because this equipment operates with a different suction dew point temperature and the counterpart dedicated condensing units likely use different compressor designs than those considered when developing the EER values included in AHRI 1250–2020.

In the June 2021 RFI, DOE requested data on appropriate EER values for use with high-temperature unit coolers and questioned how these values might depend on refrigerant or capacity. 86 FR 32332, 32345. AHRI stated that they did not have data to support EER values for use in determining AWEF for wine cellar unit coolers since most systems are sold as a matched pair. (AHRI, No. 11 at p. 11) In the June 2021 RFI, DOE also requested information on dedicated condensing units that would typically be paired with high-temperature unit coolers. 86 FR 32332, 32345–32346. Lennox and AHRI stated that there are no definitive characteristics for unit coolers that are sold for use in wine cellar refrigeration applications, and that many units are sold to users as pairs matched by contractors. (Lennox,

No. 9 at pp. 6–7; AHRI, No. 11 at pp. 11–12)

In its market evaluation, DOE has observed that a majority of high-temperature refrigeration systems are sold as matched pairs or single-packaged systems. While unit coolers sold for high-temperature walk-in cooler applications are sold separately, DOE was unable to find any dedicated condensing units marketed specifically for high-temperature walk-in applications. Thus, DOE could not use the performance data of such dedicated condensing unit models to provide an indication of the appropriate EER for dedicated condensing units paired with such high-temperature unit coolers. Rather, consistent with the interim waiver granted to LRC, DOE is proposing EER values developed using compressor performance data from Emerson and Tecumseh product websites (EERE–2020–BT–WAV–0040, No. 2 and No. 8, respectively) for high-temperature refrigeration compressor models within the applicable capacity range (2,900 Btu/h to 36,000 Btu/h). DOE expects that the dedicated condensing units paired with high-temperature walk-in unit coolers would use hermetic reciprocating compressors at lower capacities and hermetic scroll compressors at higher capacities. Also, DOE developed the EER values based on compressors rated for use with HFC–134a, R404A, or R407C refrigerants. Based on these compressor performance data, DOE calculated representative compressor EER levels for wine cellar walk-in unit coolers using the following parameters:

- 38 °F unit cooler exit dew point condition, as suggested by LRC (EERE–2020–BT–WAV–0040, No. 1 at p. 3).
- 2 °F equivalent suction line dew point pressure drop, consistent with AHRI 1250–2009 section 7.9.1.
- 7 °F evaporator exit superheat, rounding to whole number values of the 6.5 °F superheat test condition prescribed in the footnote to Table 15 of subpart R, appendix C, in case a value is not provided in an installation manual.
- 55 °F refrigerant temperature entering the compressor, representing a 10 °F refrigerant vapor temperature rise in the suction line, consistent with the temperature rise implied for medium-temperature refrigeration system test conditions.³⁶

³⁵ LRC Coil Company submitted a petition for waiver and interim waiver for specific basic models of unit cooler only walk-in wine cellar refrigeration systems. (LRC Coil, EERE–2020–BT–WAV–0040, No. 1) In reviewing another petition for waiver and interim waiver from Vinotheque for single-packaged system and matched pair system basic models (Vinotheque, EERE–2019–BT–WAV–0038, No. 6), DOE noted that the manufacturer also offered unit cooler-only systems distributed without a paired condensing system.

³⁶ AHRI 1250–2009 Table 11 prescribes a return gas temperature (measured at the condensing unit inlet location) equal to 41 °F for testing medium temperature dedicated condensing units. Also, Table 15 and section 3.3.1 of appendix C prescribe testing medium-temperature unit coolers using 25 °F saturated suction temperature (this is the same

• 90 °F annual average condensing temperature. This assumes that the condensing unit serving the unit cooler would be located outdoors and that head pressure control would prevent excessively cold condensing operation at cold outdoor temperatures.³⁷

DOE plotted the calculated compressor EER values versus calculated unit cooler capacity and noted that the EER can significantly vary with capacity. (EERE–2020–BT–WAV–0040, No. 9) EER is generally lower for low-capacity compressors and higher for high-capacity compressors, with a transition region in between. Based on the plotted calculations, DOE determined for the purpose of the interim waiver that a representative value for EER should depend on capacity. As such, DOE developed different functions of EER for three distinct capacity ranges. Table III.7 summarizes these capacity ranges and EER functions for high-temperature compressors.

TABLE III.7—EER VALUES FOR HIGH TEMPERATURE COMPRESSORS AS A FUNCTION OF CAPACITY FOR HIGH-TEMPERATURE REFRIGERATION SYSTEMS

Capacity (Btu/hr)	EER (Btu/Wh)
<10,000	11
10,000–19,999	$(0.0007 \times \text{Capacity}) + 4$
20,000–36,000	18

The LRC interim waiver includes additional test procedure provisions to obtain representations that are representative for high-temperature unit coolers, including both testing requirements and AWEF calculation requirements. These include provisions for setting ducted fan-coil unit evaporator systems.

as unit cooler exit dew point temperature), and 6.5 °F superheat (in case the installation manual doesn't provide superheat requirements). Thus, the unit cooler exit temperature would be 25 °F + 6.5 °F = 31.5 °F, and the implied suction line temperature rise is 41 °F – 31.5 °F = 9.5 °F. The analysis conducted for wine cellars rounds this to 10 °F.

³⁷ “Head pressure control” refers to the reduction of condenser heat transfer performance using fan cycling or other means when it is cold outside in order to avoid unusually low condensing temperature. Such low condensing temperatures are undesirable because they can reduce refrigeration system performance and/or increase risk of compressor damage. A typical minimum condensing temperature is 70 °F, which may apply whenever outdoor temperature is lower than 50 °F. DOE selected the 90 °F annual average to be representative of operation that would involve condensing temperature ranging from 70 °F to 120 °F, since outdoor temperature varies.

DOE proposes to include provisions for testing high-temperature unit coolers in subpart R, appendix C. These provisions, consistent with the LRC interim waiver, would include test conditions for testing these unit coolers at high-temperature refrigeration conditions, as well as EER values described previously for calculation of AWEF. DOE also proposes to include these provisions in appendix C1.

Issue 18: DOE requests comment on its proposals to adopt test procedure provisions for high-temperature unit coolers in appendices C and C1 of 10 CFR part 431, subpart R.

G. Proposal To Establish Appendix C1

In this NOPR, DOE is proposing to establish a new appendix C1 to subpart R of part 431, which would be required to demonstrate compliance coincident with the compliance date of any amended energy conservation standards that DOE may promulgate as part of a separate standards rulemaking. Certain proposed modifications to the test procedure are expected to alter measured values, and such changes are contained in the proposed appendix C1. DOE has tentatively determined that AHRI 1250–2020 improves representativeness of the walk-in refrigeration system test procedure by incorporating off-cycle measurement for components in addition to off-cycle fan power and providing test options for single-packaged dedicated systems, in addition to other changes. Therefore, DOE is proposing to incorporate AHRI 1250–2020 by reference into its proposed test procedure at appendix C1 for walk-in refrigeration systems.

Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann commented in response to the June 2021 RFI, that adopting the changes to AHRI 1250–2020 in the DOE test procedure would result in different energy consumption measurements. (Lennox, No. 9 at p. 2; AHRI, No. 11 at p. 4; Keeprite, No. 12 at p. 1; National Refrigeration, No. 17 at p. 1; Hussmann, No. 18 at p. 6) DOE has tentatively determined that certain changes in AHRI 1250–2020, if adopted in DOE's test procedure, would impact measured values as compared to the current DOE test procedure. As discussed in the following paragraphs, DOE proposes to adopt such provisions in the newly proposed appendix C1 through reference to AHRI 1250–2020 and proposes that appendix C1 would not be required for testing until such time as compliance is required with amended energy conservation standards for walk-ins that are based on testing according to

appendix C1, should DOE adopt such standards.

The test procedure changes that DOE proposes to include in a newly proposed appendix C1 are discussed in the following sections. DOE expects these changes to improve the representativeness and applicability of the test procedure for walk-in refrigeration systems.

1. Off-Cycle Power Consumption

For walk-in refrigeration systems, the term off-cycle refers to the period when the compressor is not running and defrost (if applicable) is not active. During off-cycle, unit cooler fans and other auxiliary equipment (*i.e.*, crankcase heater, receiver heater, etc.)³⁸ may typically run or cycle on and off, consuming energy. The DOE test procedure currently accounts for only unit cooler fan energy use during the off-cycle period. 10 CFR part 431, subpart R, appendix C, section 3.3.3. Specifically, the current test procedure requires manufacturers to measure the integrated average off-cycle fan wattage³⁹ for matched pair and unit coolers tested alone. Dedicated condensing units tested alone use default fan energy values rather than tested values. 10 CFR part 431, subpart R, appendix C, section 3.4.2.2. When calculating AWEF, the unit cooler fans are assumed to run at this average integrated wattage throughout the entire off-cycle duration. *Id.*

In the June 2021 RFI, DOE discussed the recommendations of the ASRAC Working Group (See Docket No. EERE–2015–BT–STD–0016, No. 56,⁴⁰ Recommendation #6) to revise the off-cycle test procedure to account for all other components that consume energy during the off-cycle, such as pan heaters, crankcase heaters, and controls. 86 FR 32332, 32348. DOE noted that AHRI 1250–2020 includes a method for determining energy consumption during

³⁸ A crankcase heater prevents refrigerant migration and mixing with the crankcase oil when the compressor is off by heating the crankcase of the compressor. A receiver heater warms refrigerant in the receiver to prevent flooded starts of the compressor and cycling on low pressure to reduce the potential for compressor damage. They are used for outdoor dedicated condensing units in colder climates.

³⁹ Fans using periodic stir cycles are tested at the greater of a 50% duty cycle or the manufacturer default. Fans with two, multi-, or adjustable-speed controls are tested at the greater of 50% fan speed or the manufacturer's default fan speed. Fans with no controls are tested at their single operating point. (See 10 CFR part 431, subpart R, appendix C, section 3.3.3.)

⁴⁰ Appliance Standards and Rulemaking Federal Advisory Committee Refrigeration Systems Walk-in Coolers and Freezers Term Sheet, available at www.regulations.gov/document?D=EERE-2015-BT-STD-0016-0056.

off-cycle for many of these components and DOE discussed the possibility of incorporating the updated industry test method into a test procedure. In response to the June 2021 RFI, the CA IOUs supported the prioritization of ASRAC Term Sheet recommendation #6. (CA IOUs, No. 14 at p. 1–2)

DOE requested comment on the representativeness and repeatability of the off-cycle test procedure in AHRI 1250–2020. 86 FR 32332, 32348. Keeprite and National Refrigeration both stated that the off-cycle power measurement in AHRI 1250–2020 is accurate. (Keeprite, No. 12 at p. 2; National Refrigeration, No. 17 at p. 2) Lennox, AHRI, ASAP, and Hussmann supported using the off-cycle power measurements in AHRI 1250–2020. (Lennox, No. 9 at p. 9; AHRI, No. 11 at p. 14; ASAP, No. 13 at p. 2; Hussmann, No. 18 at p. 17) Keeprite and National Refrigeration asserted that adopting the off-cycle power measurements in AHRI 1250–2020 would increase test burden without significant efficiency gains. (Keeprite, No. 12 at p. 3; National Refrigeration, No. 17 at p. 2) NEEA commented that AHRI 1250–2020 captures off cycle energy consumption more fully but does not appear to account for start up or shutdown variation. (NEEA, No. 16 at p. 2)

Also, in the June 2021 RFI, DOE sought feedback on whether there were additional walk-in refrigeration system components that consume energy while the unit is in off-cycle mode, which AHRI 1250–2020 does not address. 86 FR 32332, 32348. DOE did not receive comments on this topic.

In the June 2021 RFI, DOE additionally requested comment on the magnitude of off-cycle energy use for each component. *Id.* DOE did not receive comments on this topic.

DOE acknowledges that adopting the off-cycle power measurements in AHRI 1250–2020 may incrementally increase test time; however, obtaining off-cycle power measurements would account for less than 10 percent of the overall setup and test duration for walk-in refrigeration systems. In its testing, DOE has found that the additional energy use measured using the off-cycle power measurements in AHRI 1250–2020 can be up to 60% more than the off-cycle power measurements in the current test procedure, indicating that the current test procedure does not fully represent off-cycle power use for walk-in refrigeration systems. Therefore, DOE proposes adopting the off-cycle

procedure in sections C3.5, C4.2, and Table C3 in AHRI 1250–2020.

In the following sections (III.F.1.a through III.F.1.d), DOE presents in more detail its proposals to modify the off-cycle test method and metric.

a. Off-Cycle Test Duration and Repetition

DOE proposes revising the off-cycle test procedure to account for all other components (beyond evaporator fans) that consume energy during the off-cycle, including, but not limited to pan heaters, crankcase heaters, and controls (collectively, “ancillary equipment”). To account for this energy, DOE proposes adopting the off-cycle power measurements in sections C3.5, C4.2, and Table C3 in AHRI 1250–2020. This method is generally consistent with the current DOE test method used to account for off-cycle evaporator fan power; however, DOE proposes adopting AHRI 1250–2020 in order to properly account for the energy use of ancillary equipment.

Specifically, AHRI 1250–2020 includes two off-cycle test durations: One for evaporator fans and ancillary equipment with controls that are time-varying or respond to ambient or refrigerant temperatures (*e.g.*, a crankcase heater or fan cycling control), and one for evaporator fans and ancillary equipment without such controls. For the former, AHRI 1250–2020 requires a 30-minute test. DOE expects that 30 minutes is the shortest duration that can effectively capture the cyclic and time-varying energy use that may occur for equipment with controls—thus, this duration balances the need to minimize test burden with the need for an accurate and representative test method. For units lacking such controls, AHRI 1250–2020 requires a test cycle duration of 5 minutes. In the absence of controls, DOE expects the off-cycle integrated power to be constant over time; consequently, DOE is proposing the shorter 5-minute duration, which would minimize test burden, while still providing results representative of off-mode energy consumption.

AHRI 1250–2020 also has two sets of test repetition requirements: One for evaporator fans and ancillary equipment with controls that are time-varying or respond to ambient or refrigerant temperatures (*e.g.*, a crankcase heater or fan cycling control), and one for evaporator fans and ancillary equipment without such controls. For the former, AHRI 1250–2020 requires that the off-

cycle test for each applicable load point⁴¹ would consist of three initial test cycles, with the potential for three supplemental cycles. DOE anticipates that at least three cycles are needed to determine if the measured integrated off-cycle power is representative of typical operation because the cyclic operation of evaporator fan and ancillary equipment controls has the potential to introduce a significant level of test-to-test variability. Specifically, AHRI 1250–2020 states that if the integrated power for each of the first three cycles is within 2 percent of the average of the first three cycles, then off-cycle power would be calculated as the average of the first three cycles. This requirement reduces test burden if the unit under test shows repeatable performance. If the 2 percent requirement is not met, DOE proposes running three supplemental cycles to provide an opportunity for the unit’s controls to exhibit repeatable behavior. Specifically, AHRI 1250–2020 states that if the integrated power for each of the three supplemental cycles is within 2 percent of the average of the three supplemental cycles, then off-cycle power would be calculated as the average of the three supplemental cycles—this follows the same rationale as the three initial test cycles. DOE expects that continuing to test the unit beyond a total of six cycles would be ineffectual and overly burdensome, as the previous two rounds of testing would show that stable test-to-test integrated power readings are unlikely. In the absence of stability, AHRI 1250–2020 requires off-cycle power to be calculated as the maximum of all six integrated power readings. This requirement is appropriate since it provides a conservative estimate of integrated off-cycle.

Alternatively, for equipment lacking evaporator fans and ancillary equipment controls, AHRI 1250–2020 requires a single cycle to measure integrated power. In the absence of controls, DOE expects the off-cycle integrated power to be constant from cycle-to-cycle; consequently, DOE is proposing the single-cycle test for units without ancillary power controls. DOE has preliminarily determined that this approach would minimize test burden, while providing results representative of off-mode energy consumption. A summary of test durations and fan settings based on fan control configuration and ancillary equipment control configuration is listed in Table III.8.

⁴¹ Off-cycle load points are discussed later in this section.

TABLE III.8—PROPOSED OFF-CYCLE TEST SETTINGS AND DURATIONS

Fan control configuration	Ancillary equipment control configuration	Fan setting for test	Test duration
No Control	No Control	Default setting, as shipped	5 minutes.
No Control	With Control	Default setting, as shipped	30 minutes.
User-Adjustable Speed Controls.	No Control	The greater of 50% fan speed or the manufacturer's default fan speed.	5 minutes.
User-Adjustable Speed Controls.	With Control	The greater of 50% fan speed or the manufacturer's default fan speed.	30 minutes.
User-Adjustable Stir Cycles	With or Without Control	The greater of a 50% duty cycle or the manufacturer default.	The greater of 30 minutes or three full "stir cycles."
Non-User Adjustable Controls	With or Without Control	Default setting, as shipped	30 minutes.

b. Off-Cycle Operating Tolerances and Data Collection Rates

DOE proposes to adopt the off-cycle power measurements in Section C3.5 of AHRI 1250–2020 to establish off-cycle-specific operating test tolerances. AHRI 1250–2020 excludes the first 10 minutes that follow the termination of the compressor on-cycle interval from the general operating tolerances (indoor/outdoor temperatures and power readings) established for the on-cycle steady state test. During this time period, the test room conditioning equipment is transitioning from steady state on-cycle operation into off-cycle operation and the evaporator coil will continue to remove heat from the inside room air until temperature equilibrium between the coil and the air is reached. This non-steady state operation following the on-cycle creates an environment that is temporarily difficult to control; consequently, DOE expects that the suspension of steady state tolerances during the transition period would not impact the representativeness of the test, since this non-steady state operation is representative of real-world performance during the transition period.

DOE also proposes to establish off-cycle-specific data collection rates by adopting the off-cycle power measurements approach provided in Section C3.6 of AHRI 1250–2020. Specifically, AHRI 1250–2020 requires that the minimum data collection rate be increased (with respect to steady-state requirements) from 30 to 60 test readings per hour for temperature measurements and condensing unit electric power measurements, and from 3 to 60 test readings per hour for unit cooler electric power measurements. See Table C3 in Section C3.6.2 of AHRI 1250–2020. DOE anticipates that the increased data collection rate is necessary since the off-cycle test time interval can be as low as five minutes whereas the steady-state test will typically run for at least 60 minutes. AHRI 1250–2020 also requires that off-

cycle power measurements be integrated and averaged over the recording interval with a sampling rate of no less than 1 second unless an integrating watt/hour meter is used. This requirement is necessary since power is anticipated to fluctuate during the off-cycle test. Increasing to a 1 second sampling rate allows for an accurate software integration of power that would be comparable to an integrating watt/hour meter.

c. Off-Cycle Load Points

Currently, the DOE test procedure specifies that off-cycle evaporator fan power is measured once with no specifications for ambient conditions. The current test procedure uses this approach because off-cycle fan power is not expected to vary significantly with ambient conditions. However, DOE expects the integrated power of ancillary equipment to potentially vary with ambient conditions, depending on the refrigeration system design. Consequently, DOE proposes that the off-cycle power test described in section III.G.1.a be run at each steady-state ambient test conditions as specified in Tables 4 through 17 of AHRI 1250–2020. Accordingly, refrigeration systems with dedicated condensing units located indoors would evaluate off-cycle power at a single outdoor ambient condition (90 °F dry-bulb), while systems with dedicated condensing units located outdoors would determine off-cycle power at three ambient conditions (95 °F, 59 °F, and 35 °F dry-bulb). The measured integrated off-cycle power results would then be used to calculate a revised AWEF metric, as described in the following section.

d. Modification to AWEF Calculations

Walk-in cooler AWEF is calculated as a function of steady state capacity, steady state on-cycle power, and off-cycle unit cooler fan power in the current test procedure (see Section 7 of AHRI 1250–2009). 10 CFR part 431, subpart R, appendix C, sections 3.3 and 3.4. AWEF for walk-in freezers

considers defrost electrical energy consumption in addition to steady state gross capacity, steady state on-cycle power, and off-cycle fan power. *Id.* As discussed earlier, DOE proposes to update the AWEF calculation for refrigeration systems to account for off-cycle power more fully, not just off-cycle evaporator fan power. To do so, DOE proposes adopting the off-cycle calculations in AHRI 1250–2020, which replace integrated off-cycle evaporator fan power with the combined integrated off-cycle power from the unit cooler and condensing unit in each equation. Additionally, for unit coolers tested alone, DOE proposes to update the AWEF calculation to account for all unit cooler off-cycle power—not just the evaporator fan power.⁴² To do so, DOE proposes adopting the off-cycle calculations in AHRI 1250–2020, which replace integrated off-cycle fan power with integrated off-cycle power in the unit cooler equation.

DOE, however, proposes deviating from the AHRI 1250–2020 calculations for off-cycle energy use for outdoor refrigeration systems. DOE notes that the AHRI 1250–2020 equations for average refrigeration system total power input for bin temperature T_j , e.g., Equation 13, do not appear to use off-cycle power values for the unit cooler and/or the condensing unit that vary with T_j . In fact, there are no equations providing the off-cycle power for either component as a function of T_j in Section 7 of AHRI 1250–2020, such as there are for net capacity and on-cycle power input (e.g., Equations 14 through 17). Since the off-cycle power may vary as a function of outdoor temperature as discussed previously, DOE proposes to

⁴² DOE notes that under this proposal, condensing unit off-cycle power is not explicitly accounted for unit coolers; rather, the total energy contribution from the condensing unit is based on a defined EER lookup table, which is currently found in Table 17 of AHRI 1250–2009 (incorporated by reference, 10 CFR 431.303(b)). This NOPR proposes changing that to Table 18 of AHRI 1250–2020. This aspect of the proposed unit cooler test method is consistent with the current method specified in appendix C to subpart R of 10 CFR part 431.

provide instructions for calculating off-cycle power as a function of outdoor temperature based on the measurements made at the three outdoor test condition temperatures.

For condensing unit off-cycle power, DOE proposes to require that off-cycle power for T_j less than or equal to 35 °F would be equal to the power measured for the test condition C off-cycle power test. For T_j higher than 95 °F, DOE proposes that off-cycle power would be equal to the power measured for the test condition A off-cycle power test. Between these two temperatures, DOE proposes that condensing unit off-cycle power would be determined based on the test condition B and C measurements when T_j is below 59 °F, and based on the A and B measurements when it is above 59 °F, similar to equations 14 through 17 for on-cycle capacity and power.

For unit cooler off-cycle power, it is unclear whether to apply a specific trend correlated to condensing unit outdoor air temperature. DOE notes that AHRI 1250–2020 did not establish tests for unit coolers tested alone for different condensing unit outdoor air temperatures, which supports the suggestion that there is no such trend. Hence, DOE is not proposing any equations for unit cooler off-cycle power that are based on the different bin

temperatures, T_j . Instead, DOE proposes that the three-unit cooler off-cycle power measurements that would be made when testing a matched pair or single-packaged dedicated system would be averaged, and that the resulting average, with no dependence on T_j , would be used in the AWEF calculations.

Issue 19: DOE requests comments on its proposals to align the test procedures for appendix C1 with AHRI 1250–2020, except for the use of off-cycle power measurements in the AWEF calculations for dedicated condensing units, matched pairs, or single-packaged dedicated systems intended for outdoor installation. DOE requests comments on its proposals for use in the AWEF calculations of the three sets of unit cooler and condensing unit off-cycle measurements made for outdoor refrigeration systems.

2. Single-Packaged Dedicated Systems

a. AHRI 1250–2020 Methods for Testing
As discussed in section III.B.3.c, AHRI 1250–2020 expanded methods of test for single-packaged units to include air enthalpy, calorimetry, and compressor calibration. Specifically, AHRI 1250–2020 incorporates the following tests procedures by reference:

(1) Air enthalpy method: ASHRAE 37 and ANSI/ASHRAE 41.6–2014

(“ASHRAE 41.6”), “Standard Method for Humidity Measurement”;

(2) calorimeter methods: ASHRAE 16, “Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity”;

(3) compressor calibration methods: ASHRAE 37 and ANSI/ASHRAE 23.1–2010.

AHRI 1250–2020 requires two simultaneous measurements of system capacity (*i.e.*, a primary and a secondary method) for single-packaged dedicated systems, and Section C9.2.1 of AHRI 1250–2020 requires that the measurements agree within 6 percent. Table C4 in AHRI 1250–2020 specifies which of the test methods (calorimeter, air enthalpy, and compressor calibration) qualify as primary and/or secondary methods. However, as summarized in Table III.9, DOE is proposing to modify the method of test and test hierarchy table in AHRI 1250–2020 to include a single-packaged refrigerant enthalpy method—the addition of the Single-Packaged Refrigerant Enthalpy method is the only change to the hierarchy of test methods that DOE is proposing. The reasoning behind this addition is discussed in section III.G.2.d of this document.

TABLE III.9—SINGLE-PACKAGED SYSTEM TEST METHODS AND TEST HIERARCHY

Method of test	Allowable use
Balanced Ambient Indoor Calorimeter	Primary.
Balanced Ambient Outdoor Calorimeter	Primary or Secondary.
Indoor Air Enthalpy	Primary or Secondary.
Indoor Room Calorimeter	Primary or Secondary.
Single-packaged Refrigerant Enthalpy ⁴³	Secondary.
Outdoor Room Calorimeter	Secondary.
Outdoor Air Enthalpy	Secondary.
Compressor Calibration	Secondary.

b. Waivers

DOE granted a waiver to Store It Cold for single-packaged units on August 9, 2019. 84 FR 39286. Store It Cold petitioned for a waiver after determining that the refrigerant enthalpy method specified in AHRI 1250–2009 was not providing consistent capacity measurements for its single-packaged dedicated systems. 84 FR 39286, 39287. The alternate test procedure associated with this waiver requires that the specified single-packaged basic models shall be tested using the Indoor Air Enthalpy Method and the Outdoor Air Enthalpy Method in accordance with

ASHRAE 37. 84 FR 39286, 39292. DOE also granted waivers to Air Innovations, CellarPro, Vinotemp, and Vinotheque for walk-in refrigeration systems used in wine cellar applications, where some of the basic models included in these waivers were single-packaged dedicated systems.⁴⁴ Similar to the Store It Cold waiver, the alternate test methods included in these other waivers require the specified basic models to be tested in accordance with the air enthalpy methods specified in ASHRAE 37 for testing single-packaged dedicated systems, which is now referenced by

⁴⁴ Table III.2 lists the manufacturers that have received a test procedure waiver or interim waiver for walk-in refrigeration systems designed for wine cellar applications.

AHRI 1250–2020. Use of air enthalpy methods for testing a single-packaged dedicated system captures the impact of thermal loss and the infiltration of warm air into the evaporator portion of these systems. As discussed, DOE proposes to reference in appendix C1 the methods of test for single-packaged dedicated systems in Section C9 of AHRI 1250–2020, with some modifications. Since DOE is proposing that appendix C1 would be required on the compliance date of any amended energy conservation standards, were such standards to be adopted, the current test procedure waivers for specified single-packaged basic models would expire on the compliance date of proposed appendix C1 if it should be adopted.

⁴³ As described in section III.G.2.f, this does not apply to CO₂ single-packaged units.

c. Suitability of the Single-Packaged Test Methods in AHRI 1250–2020

In the June 2021 RFI, DOE requested data or comment on the additional thermal losses associated with single-packaged dedicated systems, and whether AHRI 1250–2020 fully accounts for these losses. 86 FR 32332, 32344. Lennox, AHRI, and Hussmann stated that the AHRI 1250–2020 single-packaged formulas account for additional thermal losses. (Lennox, No. 9 at p. 5; AHRI, No. 11 at p. 10; Hussmann, No. 18 at p. 12) These stakeholders also asserted that the calorimeter test method should measure any minimal leakage. *Id.*

In response to the June 2021 RFI, the CA IOUs commented that the room calorimeter and air enthalpy test methods in AHRI 1250–2020 would address single-packaged dedicated system test challenges that led to the Store It Cold waiver petition and subsequent granting of the waiver. (CA IOUs, No. 14 at p. 2) However, the comment did not specifically address the single-packaged heat loss or its magnitude.

DOE requested comment on the representativeness of the single-packaged dedicated test and calculation methods in AHRI 1250–2020 in the June 2021 RFI. DOE additionally invited comment on whether DOE should update its test procedure to incorporate AHRI 1250–2020 by reference. 86 FR 32332, 32343–32344. While Lennox, AHRI, and Hussmann each supported the AHRI 1250–2020 test methods for single-packaged dedicated systems, these stakeholders stated that these test procedures have not yet been fully evaluated and recommended against DOE updating its test procedure to incorporate single-packaged system-specific sections of AHRI 1250–2020. (Lennox, No. 9 at p. 5; AHRI, No. 11 at p. 9; Hussmann, No. 18 at p. 12)

The calorimeter tests mentioned previously were originally developed in ASHRAE 16 for testing room air conditioning units. In the June 2021 RFI, DOE noted that precise determination of the calorimeter chamber cooling fluid heat capacity is necessary for an accurate test. 86 FR 32332, 32344. Since air conditioning units do not cool below 32 °F, the freezing temperature of pure water, ASHRAE 16 would not have encountered problems with this issue, as water can be used as the calorimetry fluid and the heat capacity of pure water is known. When testing walk-in refrigeration systems using this method, the fluid may have to be at a temperature lower than 32 °F, which

means that pure water would not be used. Precise determination of the heat capacity of glycol-water mixtures may present a challenge, since the concentration of the mixture must be determined. Therefore, in the June 2021 RFI, DOE requested feedback on what heat transfer liquids might be used to maintain test chamber temperature when testing single-packaged dedicated systems using the calorimeter method included in AHRI 1250–2020. DOE additionally requested comment on whether the calorimetric procedure in AHRI 1250–2020 for testing single-packaged dedicated systems could be modified to enhance test accuracy or repeatability. 86 FR 32332, 32344. Lennox, AHRI, and Hussmann stated that additional testing is necessary to fully evaluate each test method outlined for single-packaged units in AHRI 1250–2020. (Lennox, No. 9 at p. 5; AHRI, No. 11 at p. 10; Hussmann, No. 18 at p. 12) Daikin commented that standard EN 17432 uses a room calorimetry test for single-packaged units, with test conditions and a setup figure provided in the comment. (Daikin, No. 17 at p. 3) DOE notes the calorimetry room method suggested by Daikin does not appear to have a glycol loop and therefore does not provide a solution for heat transfer liquids that could be used when testing single-packaged dedicated systems using the calorimeter method included in AHRI 1250–2020. After consideration, DOE has tentatively determined that the comments provided do not conclusively indicate one way or the other that the AHSRAE 16 test method is unsuitable for walk-in refrigeration systems. Therefore, DOE is proposing to adopt the ASHRAE 16 calorimetry methods of test for single-packaged dedicated systems as referenced in AHRI 1250–2020. This approach would provide flexibility in selecting from one of the discussed testing methods even if these methods may be more challenging to implement for walk-in refrigeration systems than for room air conditioners. As the comments have not provided sufficient quantitative information, DOE will continue to consider this question and may take action at a later date.

DOE also discussed the requirement for a pressure equalizer device for calorimetry chambers in ASHRAE 16 in the June 2021 RFI. DOE noted that since the calibrated box method (established in the current DOE test procedure) does not require such a device, this may increase testing burden. 86 FR 32332, 32344. DOE discussed two potential alternatives to this requirement; specifically, (1) no requirement to

address transfer air or pressure equalization, or (2) require leak-free test facility chambers with no equalization requirement. *Id.* DOE requested comment on the requirement for a pressure equalizing device in ASHRAE 16 and solicited feedback on the expected cost and resource burdens associated with employing such a device. *Id.* Lennox, AHRI, and Hussmann stated that an equalizer device would not be necessary if the chamber were leak-free, that the addition of an equalizer device has not been fully evaluated and is expected to increase test burden. (Lennox, No. 9 at p. 5; AHRI, No. 11 at p. 10; Hussmann, No. 18 at p. 13) Based on the single-packaged system testing conducted by DOE, DOE is not planning to propose an equalizer device for calorimeter room testing. DOE notes that a pressure equalizer is typically used when comfort cooling devices have a damper to bring fresh air into the cooled environment. Single-packaged dedicated systems do not include this functionality and therefore a pressure equalizing device is not necessary.

Finally, DOE requested comment on any alternative test methods to measure single-packaged dedicated system capacity in the June 2021 RFI. 86 FR 32332, 32344. Lennox, AHRI, and Hussmann confirmed that the test methods included in AHRI 1250–2020 for testing single-packaged dedicated systems are sufficient. (Lennox, No. 9 at p. 6; AHRI, No. 11 at p. 10; Hussmann, No. 18 at p. 13)

Testing conducted by DOE on single-packaged units using the room calorimeter and air enthalpy methods as described in AHRI 1250–2020 suggest that these test methods appropriately account for the thermal losses experienced by this equipment. Therefore, DOE has tentatively determined that these methods are representative of single-packaged system energy use. As such, DOE proposes to adopt the single-packaged system test procedure in AHRI 1250–2020 with the modifications outlined in sections III.G.2.d and III.G.2.e of this document. DOE notes that while there may not be extensive experience applying these test methods to walk-in refrigeration systems, all the proposed test methods have been evaluated and are used extensively for testing other HVAC equipment. Additionally, DOE is required, as soon as practicable after the granting of any waiver, to publish in the **Federal Register** a notice of proposed rulemaking to amend its regulations so as to eliminate any need for the continuation of such a waiver. 10 CFR 431.401(l). Finally, DOE emphasizes

that testing according to proposed appendix C1 would not be required until such time as compliance is required with any amended energy conservation standards, should such standards be adopted. As such, were appendix C1 adopted, the existing waivers would remain in effect until such time as compliance would be required with appendix C1.

d. Single-Packaged Refrigerant Enthalpy Method

As previously discussed, AHRI 1250–2020 includes 4 potential primary, and 6 potential secondary test methods for testing single-packaged dedicated systems (see Table III.9). The refrigerant enthalpy method is not included in this list. Although the dual instrumentation test (*i.e.*, two separate measurements using the refrigerant enthalpy method) is routinely used to evaluate the capacity of matched pair, dedicated condensing, and unit cooler systems, the DX dual instrumentation method is generally considered to be impractical for testing single-packaged dedicated systems. This is primarily because it requires breaking into the liquid refrigerant line within the packaged unit, routing the line outside of the unit to pass through two mass flow meters, and then routing the line back into the unit and through dual pressure and temperature measurements before it rejoins the original liquid line at the expansion device inlet. This is generally inappropriate for a single-packaged unit because the internal volume of the added liquid line and mass flow meters adds substantially to the required refrigerant charge, and the entire assembly adds substantial pressure drop.⁴⁵ As discussed in section III.A.2.e, RSG submitted a request for waiver and interim waiver to use the refrigerant enthalpy method to test single-packaged dedicated systems with multiple refrigeration circuits, using only one mass flow meter per circuit and using added refrigerant liquid line no longer than 5 feet in length.⁴⁶ DOE is proposing to adopt a single-packaged refrigerant enthalpy method that is similar to the alternate test procedure outlined in RSG's waiver request.

The single-packaged refrigerant enthalpy method would be based using the refrigerant-side measurements of the DX Calibrated Box method in section C8 of AHRI 1250–2020 while

simultaneously using one of the "Primary" methods listed in the table for single-packaged methods of test as an air-side measurement. These primary test methods all measure the capacity delivered to the air passing through the evaporator section of the system, or to the air that is refrigerated by the system. Before disassembling the refrigeration system to set up the refrigerant-side mass flow measurement, a preliminary test at Condition A would be conducted using only the primary air-side measurement. For this test, surface-mounted temperature sensors would be installed on the evaporator and condenser coils, tubing entering and leaving the compressor, and tubing entering the expansion device. This preliminary test would be compared to the later test at Condition A using both airside and refrigerant-side measurements. To ensure that the refrigerant circuit modifications did not materially alter the system operation, the later test would be performed to confirm that (1) each on-coil temperature sensor indicates a reading that is within ± 1.0 °F of its initial-test measurement, (2) the temperatures of the refrigerant entering and leaving the compressor are within ± 4 °F, and (3) the refrigerant temperature entering the expansion device is within ± 1 °F. To limit the alteration of the refrigerant circuit, only 5 feet of tubing shall be added to the liquid refrigerant lines (not including the flow length associated with the mass flow meter).

The heat balance applied to single-packaged dedicated systems using this method would involve comparison of the air-side net capacity to a net capacity determined based on the gross refrigerant-side capacity measurement that would include adjustment for the evaporator fan heat in addition to adjustment for the single-packaged dedicated system thermal loss. The thermal loss would be calculated similarly to the duct loss calculation of Section 7.3.3.3 of ASHRAE 37–2009, in which the heat losses associated with the insulated surface areas subject to heat transfer are summed based on their surface area, thermal resistance (which is based on known insulating material and insulation thickness), and the temperatures on either side of the surface.

Issue 20: DOE requests comment on the proposed single-packaged refrigerant enthalpy test procedure for evaluating the performance of single-packaged dedicated systems.

e. Multi-Circuit Single-Packaged Dedicated Systems

Multi-circuit single-packaged refrigeration systems provide a solution for flammable refrigerants, where safety standards limit the amount of refrigerant in a refrigeration circuit. Some flammable refrigerants, like propane, are efficient and have a very low global warming potential ("GWP"),⁴⁷ making them advantageous design options for future refrigeration systems. Neither the current DOE test procedure nor AHRI 1250–2020, which DOE is proposing generally to adopt through reference in its updated test procedure for walk-in refrigeration systems, provides a method for testing single-packaged dedicated systems with multiple refrigeration circuits.

In its request for waiver and interim waiver, RSG provided an alternate test method for testing multi-circuit single-packaged dedicated systems. (EERE–2022–BT–WAV–0010–0001) This test procedure is based on the single-packaged refrigerant enthalpy method for single-packaged units described in section III.G.2.d of this document. The procedure is duplicated for each refrigeration circuit contained in the unit such that each circuit returns mass flow, enthalpy in, and enthalpy out values. The resultant mass flow and enthalpy values are used to calculate the gross refrigeration capacity for each circuit. Each circuit's gross capacity is then summed to determine the total capacity of the system.

DOE has tentatively determined that the alternate approach would generally provide a reasonable method for determining the capacity of multi-circuit single-packaged dedicated systems. However, this approach may not adequately capture the heat loss associated with single-packaged dedicated systems; therefore, an indoor air refrigeration capacity test would need to be used to confirm the multiple refrigeration circuit capacity test. In sum, DOE proposes to adopt the previously described method for determining the capacity of single-packaged dedicated systems with multiple refrigeration circuits, with the additional requirement that the primary test would be an indoor air refrigeration capacity test where the allowable refrigeration capacity heat balance is 6 percent.

⁴⁵ These issues were the primary motivation for and are described in the Store-it-Cold petition for waiver—see the discussion in section III.G.2.b of this document.

⁴⁶ The RSG petition for waiver and interim waiver can be found at www.regulations.gov/docket/EERE-2022-BT-WAV-0010.

⁴⁷ Global warming potential is a measure of a substance's ability to warm the planet relative to CO₂. CO₂ has a GWP of 1 while a traditional HFC refrigerant like R134a has a GWP of 3400, meaning a ton of R134a warms the planet 3400 times more than a ton of CO₂.

In summary, DOE is proposing to adopt the test procedures in section C8 of AHRI 1250–2020 for testing single-packaged dedicated systems with modifications to allow for secondary refrigerant enthalpy tests, and to accommodate multi-circuit single-packaged dedicated systems. The proposed test methods and their designation as primary or secondary tests are outlined in Table III.9 of this document.

f. CO₂ Single-Packaged Dedicated Systems

The current DOE test procedure for single-packaged dedicated systems uses dual instrumentation refrigerant enthalpy methods. Using these methods, the current test procedure does not provide representative values for single-packaged dedicated systems that use CO₂ as a refrigerant because CO₂ remains in a gaseous state in those areas where mass flow meters are placed. The typical mass flow meters do not deliver accurate readings unless the medium being measured is in liquid form. However, the single-packaged dedicated system test methods in AHRI 1250–2020 use air enthalpy measurements and would not require any refrigerant mass flow measurements. This means single-packaged refrigeration systems that use CO₂ as a refrigerant can be tested using these methods with no issues. Therefore, DOE proposes that single-packaged refrigeration systems that use CO₂ as a refrigerant be tested using the test methods for single-packaged dedicated systems outlined in AHRI 1250–2020.

3. Detachable Single-Packaged Dedicated Systems

As discussed in section III.A.2.g DOE is aware of refrigeration systems that are installed with the evaporator unit through the wall of the walk-in, but with the condensing unit installed remotely and connected to the evaporator with refrigerant lines—DOE has defined this equipment as “detachable single-packaged dedicated systems.” Neither subpart R, appendix C, nor AHRI 1250–2020 contain provisions for testing these walk-in refrigeration systems. Detachable single-packaged dedicated systems may be tested as either systems with the condensing unit and unit cooler in separate housings or as single-packaged dedicated systems. Testing as the former is more typical of the walk-in industry and therefore may be less burdensome. However, testing as a single-packaged system using the indoor air enthalpy test would account for the heat loss of the evaporator installation. Since the

single-packaged indoor air enthalpy method would be more representative of these separable single-packaged dedicated systems, DOE is proposing as part of new appendix C1 and 10 CFR 429.53(a)(2)(i)(C) that detachable single-packaged dedicated systems would be tested using the test procedure for single-packaged dedicated systems.

Issue 21: DOE requests comment on testing detachable single-packaged dedicated systems using the test procedure for single-packaged dedicated systems.

4. Attached Split Systems

As discussed in section III.A.2.f, DOE is aware of refrigeration systems that are sold as matched systems and permanently attached to each other with beams. These systems are mounted to the cooler box with the beams piercing the interior wall of the walk-in. As discussed in section III.A.2.f, DOE is proposing to classify these systems as “attached split systems.” While thermal losses are expected to be lower for an attached split system than a single-packaged system since attached split systems have comparatively more insulation between the condenser and evaporator sides, DOE has preliminarily confirmed through testing that these systems still experience some heat leakage when compared to traditionally-installed systems that have the dedicated condensing unit and the unit cooler in separate housings. However, this heat leakage has not been studied extensively and DOE is aware that it may be difficult to calculate. Because of this issue, DOE is proposing in new appendix C1 and 10 CFR 429.53(a)(2)(i)(D) that attached split systems would be tested as a matched pair using refrigerant enthalpy methods.

Issue 22: DOE requests comment on its proposal that attached split systems be tested using refrigerant enthalpy methods.

5. Systems for High-Temperature Freezer Applications

As discussed in the December 2016 final rule, stakeholders commented that high-temperature freezer walk-ins, which have an enclosed storage (*i.e.*, room) temperature range of 10 °F to 32 °F, are typically refrigerated with medium-temperature dedicated condensing units. 81 FR 95758, 95790. Under the statutory definitions of “walk-in cooler” and “walk-in freezer,” this equipment would be considered a walk-in freezer because its room temperature is less than or equal to 32 °F. (42 U.S.C. 6311(20))

Accordingly, these refrigeration systems would be tested using a room

temperature of –10 °F, as specified in subpart R, appendix C. However, stakeholders commented that it is difficult for these medium-temperature refrigeration systems to meet this temperature condition when using lower GWP refrigerants.⁴⁸ 81 FR 95758, 95790. Lennox offered data suggesting that medium-temperature units generally perform more efficiently at the 10 °F operating condition (*i.e.*, the low end of the cited “high-temperature freezer” temperature range) than low-temperature systems. (Docket EERE–2015–BT–STD–0016, Lennox, No. 89⁴⁹ at pp. 2–5) Lennox suggested that this “high-temperature freezer” application may justifiably represent a third class of walk-in refrigeration systems, but also noted the reporting and testing burden that establishing an additional set of classes would incur. *Id.* In response, DOE noted that manufacturers of equipment that cannot be tested in a way that properly represents their performance characteristics may petition DOE for a test procedure waiver, as detailed in 10 CFR 431.401. DOE also indicated that it may consider amending its regulations by establishing new equipment classes and applicable test methods. 81 FR 95758, 95791.

In the June 2021 RFI, DOE presented three potential approaches for testing and certifying high-temperature freezers. One approach would provide for testing and certification based on the standardized 35 °F walk-in cooler temperature (or corresponding refrigerant suction conditions), if the walk-in refrigeration system is marketed at or above 10 °F. By extension, the approach would also allow representations of performance (*e.g.*, capacity, power input) of such medium-temperature refrigeration systems for walk-in temperatures at 10 °F and higher without requiring them to be tested and certified based on the –10 °F low-temperature walk-in test condition. 86 FR 32332, 32350.

DOE could establish new definitions for the terms “high-temperature freezer system” and “medium-temperature refrigeration system,” that implement this potential structure. For example, “high-temperature freezer system” could be defined as “a refrigeration

⁴⁸ Lennox commented that the industry was moving to low-GWP refrigerants in response to the Environmental Protection Agency final rule under the Significant New Alternatives Policy (“SNAP”) program that prohibited the use of R–404A in certain retail food refrigeration applications, including WICF refrigeration systems starting July 20, 2016. (Docket EERE–2016–BT–TP–0030, Lennox, No. 13 at p. 2) For further discussion of the SNAP rule, see section III.G.9 of this document.

⁴⁹ Available at www.regulations.gov/document?D=EERE-2015-BT-STD-0016-0089.

system used to cool the interior of walk-in freezers and maintain a room temperature of between 10 °F and 32 °F,” while “medium-temperature refrigeration system” could be defined as “a refrigeration system used to cool the interior of a walk-in cooler or a walk-in freezer operating above 32 °F.”

A second alternative presented in the June 2021 RFI would be to require walk-in cooler refrigeration systems to be tested and certified at their lowest application temperature conditions. 86 FR 32332, 32350. This approach would be similar to that taken for commercial refrigerators, freezers, and refrigerator-freezers, where manufacturers report the lowest application product temperature, *i.e.*, the lowest average compartment temperature at which the equipment can operate during testing (section 2.2 of appendix B to part 431, subpart C). For walk-ins, this concept could be based on the lowest evaporator return air temperature for matched pair refrigeration systems and the lowest saturated suction temperature (and a suitable corresponding return gas temperature) for dedicated condensing units tested alone. This approach would result in ratings for units used in high-temperature freezer applications that are representative of field performance, since the refrigeration system would be tested at a representative box temperature for such an application. Further, this approach would not presuppose what the optimal high-temperature freezer operating condition would be since it avoids selecting a standardized condition that may be unachievable by some units. However, AWEF ratings obtained from the lowest application temperature for different units, which would be rated for different box temperatures, would not be directly comparable. This approach would also add testing and reporting burden associated with the additional test condition.

Finally, DOE presented a third approach in the June 2021 RFI, that would establish a single standardized test condition at which walk-in cooler refrigeration equipment would be tested. 86 FR 32332, 32350. This approach would result in AWEF ratings that are not as reflective of the expected field performance as compared with the lowest application temperature approach. Under a standardized test condition approach, all walk-in cooler refrigeration systems would be rated at the same condition, providing more directly comparable ratings for models that serve similar applications.

In the June 2021 RFI, DOE requested comment on the three potential approaches for addressing high-

temperature freezer walk-ins as well as any other potential approaches that DOE did not discuss. 86 FR 32332, 32350. Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann supported the first option presented by DOE, specifically, testing and rating high-temperature freezer systems at 35 °F. (Lennox, No. 9 at p. 10; AHRI, No. 11 at p. 15; Keeprite, No. 12 at p. 3; National Refrigeration, No. 17 at p. 2; Hussmann, No. 18 at pp. 17–18) Keeprite and National Refrigeration both stated that this approach would eliminate the need to create a new class of equipment, and thus avoid additional testing. (Keeprite, No. 12 at p. 3; National Refrigeration, No. 17 at p. 2) Additionally, Keeprite stated that medium-temperature equipment design is no different from high-temperature freezer equipment design and therefore concluded that testing the same equipment twice would have no tangible benefit. (Keeprite, No. 12 at p. 3) ASAP and the CA IOUs recommended the third option presented by DOE, which suggested establishing new, representative test conditions for high-temperature freezers irrespective of their lowest operating temperature. (ASAP, No. 13 at p. 3; CA IOUs, No. 14 at p. 4) Specifically, the CA IOUs stated that they support establishing additional equipment classes for refrigeration systems that are not well represented by the 35 °F indoor test conditions in DOE’s current test procedure. (CA IOUs, No. 14 at pp. 3–4) DOE understands the CA IOUs comment to infer that for systems not well represented by the 35 °F indoor test conditions, this equipment should be included in a separate equipment class and energy use determined at a more representative temperature, with definitions and labelling that clearly identify that these units have different test conditions than ‘standard’ walk-in refrigeration systems.

In the June 2021 RFI, DOE also requested information to inform the development of test procedures for high-temperature freezer systems. 86 FR 32332, 32350. Specifically, DOE sought comment on the test procedure parameters or calculations that would need to be modified to test medium-temperature refrigeration systems in the high-temperature freezer range. *Id.* Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann stated that no new test procedures would be necessary if the DOE test procedure were to require testing and rating high-temperature freezers at 35 °F. (Lennox, No. 9 at pp. 10–11; AHRI, No. 11 at pp. 15–16; Keeprite, No. 12 at p. 3; National

Refrigeration, No. 17 at p. 2; Hussmann, No. 18 at pp. 18–19)

As also discussed in the June 2021 RFI, if DOE were to pursue the lowest application temperature approach or the standardized high-temperature freezer test condition approach, DOE would need to establish certain new default values to calculate the AWEF and net capacity of stand-alone high-temperature freezer dedicated condensing units. 86 FR 32332, 32350. Currently, the test procedure provides equations for determining evaporator fan power, defrost energy, and defrost heat load, all of which are used in lieu of matched unit cooler test data (section 3.4.2 of subpart R, appendix C).

The current test procedure offers two separate equations that relate the cooling capacity to the evaporator fan power for medium- and low-temperature unit coolers (section 3.4.2.2 of subpart R, appendix C). Based on the condensing unit capacity at the medium-temperature test condition (35 °F box temperature), using the medium-temperature equation seems to be the most appropriate approach since the dedicated condensing units in question would also be certified as medium-temperature dedicated condensing units. This approach also assumes that fan energy use at high-temperature freezer conditions would be the same as fan energy use at medium-temperature conditions since it makes no adjustment in the calculated fan power for the high-temperature freezer application. DOE requested comment on the appropriateness of using the current medium-temperature refrigeration system default fan input power equations (found at section 3.4.2.2 of subpart R, appendix C) to represent the fan input power of high-temperature freezer refrigeration systems. 86 FR 32332, 32350. In response, Lennox, AHRI, and Hussmann recommended using the current low-temperature default fan input power equation since medium-temperature dedicated condensing units are typically paired with low-temperature unit coolers for use in high-temperature freezer applications and low-temperature unit coolers operate at higher suction temperatures than medium-temperature unit coolers. (Lennox, No. 9 at p. 11; AHRI, No. 11 at p. 16; Hussmann, No. 18 at p. 19)

In the current test procedure, defrost energy and defrost heat load for stand-alone dedicated condensing units are estimated based on the condenser capacity using an equation in section 3.4.2 of subpart R, appendix C. The calculations apply only to freezer models, since they assume that

refrigeration systems serving walk-in coolers are not equipped for defrost capability and thus have no defrost energy or heat load. However, medium-temperature refrigeration systems used for high-temperature freezer applications require defrost capability because frost that collects on the evaporator during the compressor off-cycle will not melt in sub-freezing walk-in temperature conditions. The energy and heat load of these high-temperature freezer defrost systems may differ significantly from those of -10°F freezers. Therefore, proper accounting for defrost of high-temperature freezer refrigeration systems requires developing a modified calculation. The equation found in section 3.4.2.4 of subpart R, appendix C, calculates freezer equipment daily defrost energy use (“ DF ”) using the condenser capacity (“ $q_{\text{mix},\text{cd}}$ ”) and the number of defrost cycles per day (“ N_{DF} ”). The daily defrost heat load (“ Q_{DF} ”) is directly dependent on DF (see relevant equation in section 3.4.2.5 of subpart R, appendix C). DOE anticipates calculating defrost impacts for high-temperature freezers, if adopted, would use similar equations with different magnitudes. In the June 2021 RFI, DOE requested information or data to inform the use of potential modifications to the defrost equations for high-temperature freezers, and whether frost loads and/or defrost frequency are different for high-temperature freezers when compared to walk-in freezers that operate at a temperature of -10°F . 86 FR 32332, 32350. Lennox, AHRI, and Hussmann responded that modifications to defrost energy equations are unnecessary for high-temperature freezer applications since calculations for a freezer operating at -10°F , 0°F , and 10°F would result in a negligible difference in defrost energy use. (Lennox, No. 9 at p. 11; AHRI, No. 11 at p. 16; Hussmann, No. 18 at pp. 19–20)

DOE recognizes that testing high-temperature freezer refrigeration systems at a consistent test condition is important to ensure test procedure consistency and to provide comparable performance values in the market. Additionally, DOE acknowledges that testing high-temperature freezer refrigeration systems at a temperature less than 35°F would be more representative of their actual energy use; however, it is not clear if the potential additional test burden justifies including an additional test condition for walk-in cooler refrigeration systems. Therefore, DOE has tentatively determined that medium-temperature dedicated condensing units used in

high-temperature freezer applications would continue to be tested according to subpart R, appendix C; however, DOE may revisit its approach for this equipment in a future rulemaking.

6. Systems for High-Temperature Applications

As discussed in the June 2021 RFI, DOE is aware of wine cellar (high-temperature) refrigeration systems that fall within the walk-in definition but that may be incapable of being tested in a manner that would yield representative performance results during a representative average use cycle under the current version of the walk-in test procedure. 86 FR 32332, 32344. For example, wine cellar refrigeration systems that may be installed in some commercial settings are designed to operate at a temperature range of 45°F to 65°F . Under the current walk-in test procedure, walk-in coolers must be tested while operating at 35°F —see Section 3.1.1 of subpart R, appendix C. To the extent that a wine cellar refrigeration system does not operate at 35°F , applying the required 35°F testing temperature condition when evaluating the energy usage of this equipment would not produce results representative of an average use cycle.

As discussed in section III.A.2.c, DOE has received requests for waiver and interim waiver from several manufacturers from the test procedure in subpart R, appendix C, for basic models of wine cellar refrigeration systems. DOE engaged with AHRI, the industry trade association, to discuss how to develop a consistent alternate testing approach for high-temperature refrigeration systems that would apply to all impacted manufacturers. Ultimately, AHRI submitted a memorandum on behalf of its wine cellar members supporting (1) a 45°F minimum operating temperature for high-temperature refrigeration systems, and (2) testing at 50 percent of maximum external static pressure, with manufacturers providing maximum external static pressure values to DOE.⁵⁰ DOE has granted interim waivers or waivers to the manufacturers listed in Table III.2 for specified basic models of wine cellar refrigeration systems. These waivers provide an alternate test procedure for specific basic models of single-packaged dedicated systems,

matched pair, and unit-cooler-only high-temperature refrigeration systems.

In the June 2021 RFI, DOE requested comment on the alternative test procedure for high-temperature refrigeration systems, and if the procedure would be appropriate for basic models other than those specified in the waivers. 86 FR 32332, 32345. AHRI and Lennox both recommended that DOE adopt the test procedures outlined in the waivers. (Lennox, No. 9 at p. 6; AHRI, No. 11 at p. 11) AHRI and Lennox also stated that the ASHRAE 210P subcommittee is evaluating the inclusion of the waiver revisions into their test standard. *Id.*

DOE is proposing to include a test procedure for testing and rating high-temperature matched-pair⁵¹ systems. The proposed test procedure specifies an air entering dry-bulb temperature of 55°F . DOE proposes that testing high-temperature refrigeration systems that are single-packaged systems be conducted using one of the following: The indoor air enthalpy method; the outdoor air enthalpy method; the compressor calibration method; the indoor room calorimeter method; the outdoor room calorimeter method; or the balanced ambient room calorimeter method as specified in AHRI 1250–2020.

As discussed in the June 2021 RFI, many refrigeration systems for wine cellars are designed for both ducted and non-ducted air delivery. 86 FR 32332, 32345. The current DOE test procedure does not address the testing of ducted systems. In section III.A.1.d, DOE proposed including ducted single-packaged units in the scope of the walk-in test procedure. In section III.A.2.d, DOE proposed a definition for a ducted fan coil unit and proposed removing the restriction of ducts from the definition of a single-packaged unit. The alternate test approach in the waivers requires that testing of ducted units be conducted at 50 percent of the maximum external static pressure (“ESP”), subject to a tolerance of $-0.00/+0.05$ in. wc.⁵² DOE requested feedback on its approach for testing ducted units, if testing at 50 percent of maximum ESP is representative, if there are other industry test methods that include testing of ducted. 86 FR 32332, 32345. Lennox and AHRI supported testing at 50 percent of the maximum ESP, stating

⁵⁰ Memorandum from AHRI, “Department of Energy (DOE) Wine Cellar Cooling Systems Test Procedure Waiver Industry Comments from AHRI Membership,” August 18, 2020. (EERE–2019–BT–WAV–0028, No. 5 (CellarPro); EERE–2019–BT–WAV–0029, No. 5 (Air Innovations); EERE–2019–BT–WAV–0038, No. 5 (Vinotheque); EERE–2019–BT–WAV–022, No. 2 (Vinotemp))

⁵¹ A “matched refrigeration system” is also called a “matched pair” and is a refrigeration system where the condensing system is distributed into commerce with a specific unit cooler(s). See 10 CFR 431.302.

⁵² Inches of water column (“in. wc”) is a unit of pressure conventionally used for measurement of pressure differentials.

that it will provide representative performance values. (Lennox, No. 9 at p. 6; AHRI, No. 11 at p. 11) The CA IOUs recommended that DOE require manufacturers to publish the maximum ESP to ensure that consumers do not exceed the maximum static pressure when they install these units so that the efficiency and operating capacity measured by the test procedure are representative of average use. (CA IOUs, No. 14 at p. 4)

Consistent with the waivers that DOE has granted for high-temperature refrigeration systems, DOE proposes to require that testing for ducted systems would be conducted with ducts fitted and at 50 percent of the unit's maximum ESP, subject to a tolerance of $-0.00/+0.05$ in. wc. DOE would include this provision to apply to any ducted units, not strictly high-temperature refrigeration systems. DOE proposes adding clarification on how to set ESP as follows. If testing using either the indoor or outdoor air enthalpy method, which includes a measurement of the air volume rate, the airflow measurement apparatus fan would be adjusted to set the external static pressure—otherwise, the external static pressure could be set by symmetrically restricting the outlet of the test duct.

DOE has tentatively determined that requiring manufacturers to publish the maximum ESP could further ensure that the test conditions are representative of installation conditions. DOE intends to address in a future certification rulemaking the certification of the maximum ESP for each ducted unit. However, DOE proposes at this time to include a contingency in the test procedure for those cases where the maximum ESP is not listed in the installation instructions. DOE proposes that if the ESP is not provided, it would be set such that the air volume rate for the test is equal to two-thirds of the value that is measured for zero ESP operation. Making the measurements and adjustments required for this setup step would require use of an airflow measurement apparatus.

Issue 23: DOE requests comment on provisions for setting ESP when testing ducted units.

Finally, in the June 2021 RFI, DOE requested comment on any other issues regarding the testing of wine cellar (high-temperature) refrigeration systems. 86 FR 32332, 32346. Lennox and AHRI suggested that DOE work with wine cellar manufacturers to incorporate high-temperature refrigeration systems adequately as a separate category. (Lennox, No. 9 at p. 7; AHRI, No. 11 at p. 12) Lennox and AHRI also both suggested that there may

need to be a high medium temperature category of ducted indoor and outdoor units. *Id.* The same commenters noted the impact of HFC regulations on wine cellar refrigeration and recommended alternative refrigerants be evaluated. *Id.* DOE may evaluate equipment categories and refrigerant requirements for high-temperature refrigeration systems in a future energy conservation standards rulemaking. The CA IOUs recommended that definitions and labeling be developed to clearly differentiate high-temperature refrigeration units from medium temperature units. (CA IOUs, No. 14 at pp. 3–4) In response to the comment from the CA IOUs, DOE has proposed a high-temperature refrigeration system definition that differentiates these units from other refrigeration systems.

7. Variable-, Two-, and Multiple-Capacity Systems

As discussed in the June 2021 RFI, DOE expected the majority of refrigeration equipment within the dedicated condensing class to be certified as dedicated condensing units tested alone, with a much smaller number of systems certified as matched pairs. 86 FR 32332, 32348–32349. DOE's review of CCMS data has confirmed that most certified dedicated condensing unit basic models are dedicated condensing units tested and rated alone rather than matched pairs. This is consistent with comments made during the 2014 and 2016 rulemakings. However, the current DOE test procedure does not include a method for assessing stand-alone multiple- and variable-capacity systems. Similarly, AHRI 1250–2020 does not include test procedures or conditions for indoor variable- or two-capacity units. To address this gap, the ASRAC Working Group recommended that DOE amend its test procedure to allow for separate ratings of stand-alone variable-capacity dedicated condensing units. (ASRAC Term Sheet Recommendation #6)

Historically, refrigeration systems have been designed using a single-speed compressor, which operates at full cooling capacity while the compressor is on. To match the cooling load of the refrigerated space, which in most cases is less than the full cooling capacity of the compressor, a single-speed compressor cycles on and off. In contrast, variable-speed systems employ an inverter-driven compressor that can reduce its speed to match the cooling load. Accordingly, a variable-speed compressor can deliver cooling that more closely matches the load. This can reduce energy use by unloading the system's heat exchangers, allowing them

to operate more effectively, and may also allow reduction of fan speeds, which can further enhance savings potential. Emerson's digital technology, used in scroll compressors, can also vary the average refrigerant flow by cycling the engagement of the scroll elements that make up the compressor—the duty cycle of this engagement within a cycle time on the order of 15 to 20 seconds can be varied to adjust average capacity. Similarly, a two- or multiple-capacity compressor can reduce its displacement (volume intake per revolution), for example in a multiple-cylinder reciprocating compressor by “unloading” individual cylinders within the compressor. This allows the compressor to more closely match the required cooling load. Other staging technologies have been used, including multiple compressors and scroll compressors with a closable port that deactivates the outermost scroll wraps when open, thus reducing effective displacement. DOE is aware of some multiple- or variable-capacity dedicated condensing units that are currently available on the market using such compressor technologies.⁵³

The current DOE test procedure measures the performance of a walk-in condensing unit while operating under a full cooling load at a fixed capacity; *i.e.*, the compressor is operated continuously in its “on” state. See Tables 11 through 14 of AHRI 1250–2009, and section 3 of subpart R, appendix C, for further details. While AHRI 1250–2009 and AHRI 1250–2020 both include test methods for two-, multiple-, and variable-capacity matched pair refrigeration systems with outdoor dedicated condensing units, there is no test method for such dedicated condensing units when tested alone.

In the June 2021 RFI DOE requested information on the development of test standards for, the efficiency gains of, and the market availability of multiple and variable-capacity systems. 86 FR 32332, 32349. Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann all stated that the market for variable capacity units is low and does not warrant test procedure changes. (Lennox, No. 9 at pp. 9–10; AHRI, No. 11 at p. 14; Keeprite, No. 12 at p. 2; National Refrigeration, No. 17 at p. 2; Hussmann, No. 18 at p. 17) Keeprite stated that variable capacity units are most often designed in tandem with the evaporator unit, and that AHRI 1250–

⁵³ Multiple-capacity product information from one manufacturer can be found at www.regulations.gov under Docket EERE–2017–BT–TP–0010, No. 4.

2020 tests were acceptable for all systems on the market. (Keeprite, No. 12 at p. 2) ASAP and NEEA recommended DOE develop a test method for dedicated condensing units tested alone. (ASAP, No. 13 at p. 2; NEEA, No. 16 at p. 2) NEEA notes that no matched systems are certified in CCMS indicating that the lack of test procedure may be limiting market adoption. (NEEA, No. 16 at p. 2) Similarly the CA IOUs stated that accurately measuring the field performance of variable capacity units is key for market adoption. (CA IOUs, No. 14 at p. 2) ASAP noted the ASRAC Working Group's recommendation to develop a test procedure for dedicated condensing units tested alone. (ASAP, No. 13 at pp. 2–3) ASAP, the CA IOUs, and NEEA all recommended that DOE evaluate whether AHRI 1250–2020 has the capability to measure real world cycling conditions of refrigeration systems. (ASAP, No. 13 at p. 2; CA IOUs, No. 14 at pp. 2–3; NEEA, No. 16 at p. 2) The CA IOUs note that this is important for more widespread adoption of variable capacity technology. (CA IOUs, No. 14 at p. 2) The CA IOUs recommended a potential alternative of testing variable capacity systems only as matched systems and having matching guidelines, similar to ASHRAE 29 or AHRI 810. (CA IOUs, No. 14 at p. 3)

DOE acknowledges the small market share of variable- and multiple-capacity units but notes that the ASRAC Working Group agreed to the need for such test procedures for dedicated condensing units tested alone. Because of this, DOE proposes adding test procedures and conditions for variable-, two-, and multiple-capacity dedicated condensing units. DOE also proposes test methods for variable-, two-, and multiple-capacity matched pairs with indoor dedicated condensing units. To support these proposed additions, DOE also proposes to add a definition specifying that a “multiple-capacity” refrigeration system is one having three or more stages.

a. Dedicated Condensing Units

As discussed, AHRI 1250–2020 specifies test conditions for matched variable- and multi-capacity refrigeration systems. Because matched pairs are complete refrigeration systems, the test conditions do not address refrigerant conditions in the refrigerant lines connecting the condensing unit and the unit cooler. Instead, the test specifies conditions for the air entering the unit cooler and the air entering the condensing unit. Test procedures for dedicated condensing units tested alone must address refrigerant conditions in

the lines that would connect the condensing unit to a unit cooler. For example, Table 12 of AHRI 1250–2020 provides test conditions for fixed capacity refrigerated indoor dedicated condensing units. The table specifies the refrigerant suction dew point return gas temperature at the condensing unit suction inlet—these conditions reflect the operation of a representative unit cooler as well as the temperature rise of refrigerant as it returns to the condensing unit in the suction line. In addition, the test procedure calculations also address the direct energy use of the unit cooler, specifically the unit cooler fan and (for freezer dedicated condensing units) the defrost heater energy input and heat impact. Section 7.9 of AHRI 1250–2020 includes equations providing representative values for some of these parameters—see, e.g., Equation 130 for on-cycle unit cooler power and Equation 118 for off-cycle unit cooler power. Section C10.2.2 in AHRI 1250–2020 includes equations providing representative values for the defrost parameters.

To extend the test procedure to variable- and multiple-capacity dedicated condensing units, the test would need to specify how the parameters representing the unit cooler would change at part-load as compared to full-load. DOE is proposing new test conditions for such models, including values representing the unit cooler and suction line influence on operation at part-load. The proposed test conditions address condensing unit suction inlet refrigerant pressure (represented as dew point temperature) and temperature for the part-load conditions. The condenser air inlet conditions would be the same as for existing tests of dedicated condensing units: Tests only with 90 °F dry bulb entering air temperature for indoor dedicated condensing units, and tests at 95 °F, 59 °F, and 35 °F for outdoor dedicated condensing units. Also, the maximum-capacity test conditions would be the same as the test conditions for a single-capacity condensing unit since maximum-capacity operation of a multiple- or variable-capacity unit should match operation of a single-capacity unit. Specifically, for cooler dedicated condensing units the maximum-capacity suction connection dew point temperature would be 23 °F and the refrigerant temperature would be 41 °F—for freezers, these conditions would be –22 °F and 5 °F. These parameters would need to be defined for the part-load test conditions for variable-, multiple-, and two-capacity dedicated condensing units. In addition,

the unit cooler power levels at part-load would have to be specified, if they would be different than for full-load. Defrost parameters would not be expected to be changed for variable-, multiple-, or two-capacity dedicated condensing units as compared with single-capacity condensing units, because the defrost would occur when the dedicated condensing unit compressor is off, and the defrost energy and heat contribution depend primarily on the representative unit cooler.⁵⁴

DOE developed representative values for the part-load refrigerant conditions at the condensing unit suction inlet based on testing of two variable-capacity systems. The testing and the development of the parameters is discussed in greater detail in document EERE–2017–BT–TP–0010–0021, “Development of Test Rating Conditions for Two-Capacity, Multiple-Capacity, and Variable-Capacity Condensing Units.” The development is based on the expectation that the unit coolers with which such dedicated condensing units are paired in the field would have two-speed fans, either already installed or retrofitted as part of the condensing unit installation. The test work shows that this inclusion of two-speed fans would be necessary in order to achieve efficiency gains with part-load capacity near or lower than half of the full-load capacity.

(1) Dew Point Target Values for Part-Load Operation: Unit Cooler Exit

As unit cooler-part-load capacity decreases, the suction dew point rises, approaching the temperature of the air entering the unit cooler (“air-entering temperature”). However, when a unit cooler fan switches to reduced speed, the suction dew point falls, in this case from the reduction in unit cooler evaporator effectiveness when operating with less airflow. Note that the unit cooler fan power reduces significantly at reduced speed, and this fan heat reduction can significantly increase net capacity and efficiency at part-load. DOE developed representative trendlines for approach of unit cooler exit evaporating (dew point) temperature to the unit cooler air-entering temperature for both full- and half-speed fan operation.

However, in its development, DOE limited its approach to air-entering temperature to account for the expected exit of superheat. Refrigerant flow

⁵⁴ Although the compressor would operate during hot gas defrost, the DOE test procedure calls for testing hot gas defrost dedicated condensing units using the electric defrost default parameters. Section 3.5 of appendix C to subpart R of 10 CFR part 431.

through unit coolers is controlled by expansion devices controlling for the presence of a certain refrigerant superheat level at the unit cooler exit. The test procedure for unit coolers calls for this value to be set at 6.5 °F in case there is no manufacturer-specified level. For such operation, the temperature of the refrigerant leaving the unit cooler is 6.5 °F warmer than the dew point temperature. However, the refrigerant leaving the unit cooler can be no warmer than the entering air. Thus, the approach of dew point temperature to entering air temperature can be no more than 6.5 °F for a unit cooler operating with this level of superheat. Thus, in its development, DOE limited the approach to 7 °F to account for this issue and to provide a 0.5 °F margin.

The selection of dew point temperature at the unit cooler exit for a given part-load operating condition thus depends on the capacity level and the unit cooler fan speed (full or half speed). While different compressor part-load technologies can provide different levels of capacity turndown, DOE developed representative dew point levels based on expectations of likely part-load capacity levels. Specifically, for variable- or multiple-stage dedicated condensing units, the expected minimum level is roughly 1/3 of full capacity, and the expected intermediate level is roughly 2/3 of full capacity. For two-capacity dedicated condensing units, DOE used a representative low-capacity level of roughly half the full-capacity level.

As for unit cooler fan speed, DOE’s testing showed that the optimum capacity level for switching between speeds is near 2/3—this means that lower than this capacity level, the higher fan heat and power input associated with full fan operation outweighs the benefit of higher evaporator effectiveness. Hence, in determining the appropriate unit cooler exit condition, DOE assumed that low fan speed would be used if the compressor or compressors run at an operating level less than 65 percent. As mentioned, there are different ways that compressors can achieve part-load

conditions. The operating level determination would be based on the compressor technology. Specifically, this would involve the speed ratio for a variable-speed compressor, scroll engagement duty cycle for a digital scroll compressor, or displacement ratio for a staged compressor system that changes displacement at part-load. Hence, for those part-load conditions where the operating level (determined as appropriate for the compressor technology) is less than or equal to 65 percent, the unit cooler exit condition would be based on the low fan trend measured in DOE’s test series, and where the operating level is greater than 65 percent, it would be based on the full fan trend. Correspondingly, the fan power used in calculating AWEF would be based on the operating level as well.

(2) Compressor Operating Levels During Testing

In order to clarify the compressor operating level, DOE proposes to define specific terms appropriate for the compressor technologies expected to be used to achieve part-load operation. These terms would be “duty cycle” for digital scroll compressors, “speed ratio” for variable-speed compressors, and “displacement ratio” for compressors or compressor systems that vary the compressor inlet displacement volume to achieve capacity modulation.

DOE proposes the following definitions:

- Displacement Ratio, applicable for a staged positive displacement compressor system, means the swept volume rate, *e.g.*, in cubic centimeters per second, of a given stage, divided by the swept volume rate at full capacity.
- Duty Cycle, applicable for a digital compressor, means the fraction of time that the compressor is engaged and actively compressing refrigerant.
- Speed Ratio, applicable for a variable-speed compressor, means the ratio of operating speed to the maximum speed.

DOE is proposing to specify use of compressor operating levels during part-load testing that are consistent with the development of the representative unit

cooler exit dew point targets. For two-capacity compressors, this is straightforward since there is only one part-load operating level. For variable-capacity and multiple-capacity compressors, DOE proposes that the part-load operating levels be the lowest level (*e.g.*, speed, duty cycle, or stage) available for the compressor, and that the intermediate level be the nearest available level to the mean of the full-capacity and minimum-capacity levels. To clarify this proposal, DOE is proposing to define “Minimum Speed” and “Maximum Speed” as set out in the regulatory text at the end of this document, proposed appendix C1 to subpart R of part 431.

(3) Dew Point Target Values for Part-Load Operation: Condensing Unit Inlet

The previous section discussed the approach for development of appropriate unit representative cooler exit conditions for part-load operation of a condensing unit tested alone. However, performance depends on conditions at the condensing unit inlet. For full-load operation, the test procedure operating conditions are based on assuming that the pressure drop in the suction line is equivalent to a 2 °F reduction in dew point temperature. 81 FR 95758, 95792 (December 28, 2016). For part-load operation, the suction line pressure drop would be lower, due to the reduced refrigerant flow rate. In its development of condensing unit test conditions, DOE assumed that the suction line pressure drop would be equivalent to a dew point reduction of 1 °F when the part-load capacity is 50 percent of the full-load capacity or more and would be 0.5 °F when the capacity is lower (*see* discussion in EERE–2017–BT–TP–0010–0021, “Development of Test Rating Conditions for Two-Capacity, Multiple-Capacity, and Variable-Capacity Condensing Units”). The suction dew point levels at the condensing unit inlet would then be as indicated in Table III.10 and Table III.11.

TABLE III.10—TWO-CAPACITY DEDICATED CONDENSING UNIT SUCTION DEW POINTS

Application	High-capacity suction dew point, °F	Low capacity, high unit cooler fan speed, suction dew point, °F	Low capacity, low unit cooler fan speed, suction dew point, °F
Cooler	23	25.5	23
Freezer	– 22	– 19.5	– 22

TABLE III.11—VARIABLE-CAPACITY OR MULTIPLE-CAPACITY DEDICATED CONDENSING UNIT SUCTION DEW POINTS

Application	Maximum-capacity suction dew point, °F	Intermediate capacity, high unit cooler fan speed, suction dew point, °F	Intermediate capacity, low unit cooler fan speed, suction dew point, °F	Minimum-capacity suction dew point, °F
Cooler	23	25.5	22	26
Freezer	–22	–19.5	–23	–19

(4) Target Refrigerant Temperature at Condensing Unit Inlet

As discussed previously, the refrigerant temperature at the exit of the representative unit cooler is equal to the unit cooler exit dew point temperature plus the superheat, assumed to be 6.5 °F. The refrigerant warms up in the suction line as it returns to the condensing unit. For full-load operation, the test procedure specifies condensing unit inlet temperature conditions, *i.e.*, 41 °F for cooler dedicated condensing units and 5 °F for freezer condensing units. In a cooler system operating at full-load in a 95 °F outdoor condition, this means that the refrigerant is warmed from 31.5 °F at the unit cooler exit to 41 °F at the condensing unit inlet. Most of this warmup would be expected to occur

where the suction line is exposed to 95 °F outdoor conditions, since the cooler interior temperature at 35 °F is only a few degrees warmer than the refrigerant exiting the unit cooler. The suction line exposed to outdoor air conditions can be seen as a heat exchanger with low effectiveness. For the purposes of determining the trend of suction line refrigerant temperature increase at part-load, DOE assumed that the suction line thermal resistance would remain the same as the capacity level changes. This means that when refrigerant flow is lower at part-load, the heat transfer effectiveness would be higher, and the refrigerant temperature rise would be greater. (See the more detailed discussion in EERE–2017–BT–TP–0010–0021, “Development of Test

Rating Conditions for Two-Capacity, Multiple-Capacity, and Variable-Capacity Condensing Units”) The document discusses in more detail how the suction line temperature rise was calculated for different operating conditions and related to the operating capacity level of the condensing unit. Note that for refrigerated outdoor dedicated condensing units using test condition C, no change in the condensing unit inlet temperature is assumed for different capacity levels, because the 41 °F specified for single-capacity systems already suggests a suction line heat transfer effectiveness greater than 100 percent. Hence, DOE proposes no change in condensing unit inlet temperature for cooler dedicated condensing units for condition C.

TABLE III.12—TWO-CAPACITY DEDICATED CONDENSING UNIT RETURN GAS CONDITIONS

Test title	Unit cooler fan level corresponding to compressor operating level	Freezer return gas, °F	Cooler return gas, °F
Capacity, Condition A, Low Capacity	Low	13.5	45.0
	High	12.0	42.5
Capacity, Condition A, High Capacity	High	5	41
Capacity, Condition B, Low Capacity	Low	13.0	41.0
	High	11.5	41.5
Capacity, Condition B, High Capacity	High	5	41
Capacity, Condition C, Low Capacity	Low	12.0	42.5
	High	10.5	41.0
Capacity, Condition C, High Capacity	High	5	41

TABLE III.13—VARIABLE-CAPACITY DEDICATED CONDENSING UNIT RETURN GAS CONDITIONS

Test title	Unit cooler fan level corresponding to compressor operating level	Freezer return gas, °F	Cooler return gas, °F
Capacity, Condition A, Minimum Capacity	Low	26.5	53.0
Capacity, Condition A, Intermediate Capacity	Low	10.5	43.0
	High	12.0	45.5
Capacity, Condition A, Maximum Capacity	High	5	41
Capacity, Condition B, Minimum Capacity	Low	24.0	46.0
Capacity, Condition B, Intermediate Capacity	Low	10.0	40.0
	High	11.5	41.5
Capacity, Condition B, Maximum Capacity	High	5	41
Capacity, Condition C, Minimum Capacity	Low	20.0	41.0
Capacity, Condition C, Intermediate Capacity	Low	10.0	41.0
	High	10.5	41.0
Capacity, Condition C, Maximum Capacity	High	5	41

(5) Unit Cooler Power To Use for AWEF Calculations

As discussed previously, the proposed test for dedicated condensing units with more than one compressor capacity is based on the expectation that a representative unit cooler with which the condensing unit would be paired in the field will have or be fitted with during installation a two-speed or variable-speed fan, and that the fan would operate at half-speed as appropriate for part-load operation. Also discussed previously, the unit cooler dew point target for the test depends on the assumption for unit cooler fan operating condition, and DOE is proposing that half-speed would be used for compressor operating levels up to 65 percent. AHRI 1250–2020 already provides power input levels for a representative unit cooler with fans operating at full- and half-speed levels (for example, see Equations 118 and 130 of the test standard, providing representative wattages for off-cycle and on-cycle wattages). DOE proposes that the half-speed off-cycle wattage would also be used for half-speed on-cycle operation when calculating AWEF.

(6) Other Aspects of AWEF Calculations

DOE proposes that the calculations used to determine AWEF for dedicated condensing units with more than one capacity level would be essentially identical to the calculations for matched pair or single-packaged dedicated systems once capacity and power input are determined for each standard operating condition at the different capacity levels. However, this proposal would adjust the calculation methods for variable- and multiple-capacity systems, consistent with the direction taken for calculating efficiency metrics for variable-capacity central air conditioners and heat pumps in the test procedure final rule published in 2016 for those products. These changes are described in section III.G.7.c of this document.

Issue 24: DOE requests comments on its proposals for testing multiple-, variable-, and two-capacity dedicated condensing units tested alone. DOE specifically requests comments on (a) the expectation that a unit cooler with which such a condensing unit is paired in the field would have two-speed (or variable-speed) fans or be fitted with such fans during installation, (b) the proposed compressor operating levels to use for testing, (c) the proposed compressor operating level at which the unit cooler fan would be assumed to switch to half-speed, (d) the proposed targets for unit cooler exit and

condensing unit inlet refrigerant temperatures and dew point target temperatures, and (e) the unit cooler half-fan-speed input wattage.

(7) Information Required for Testing

Testing of dedicated condensing units with multiple capacity levels requires setting operating conditions for testing that are not required when testing single-capacity dedicated condensing units. DOE expects that some of this information may not be readily available in installation instructions and may consider whether certification of some of the required information may be needed in a separate rulemaking addressing certification.

(8) Potential Use of Equations Rather Than Tabulated Values for Target Test Conditions

The proposed tabulated target values for suction dew point and suction temperature for part-load operation of dedicated condensing units shown in Table III.10 through Table III.13 were using correlations for the trends of unit cooler operation and suction line pressure drop and heat transfer developed based on test data (See the discussion in EERE–2017–BT–TP–0010–0021, “Development of Test Rating Conditions for Two-Capacity, Multiple-Capacity, and Variable-Capacity Condensing Units”) The target values also consider likely compressor minimum operating levels and decisions regarding the unit cooler fan operating level corresponding to each compressor operating level. Rather than use a tabular approach to specifying target operating conditions, DOE could consider direct use of the correlations for determination of target test conditions. The approach would involve, for each part-load test, using (1) two correlations to calculate the target condensing unit suction inlet dew point, and (2) two equations to calculate target condensing unit suction inlet temperature. This approach would provide more flexibility in manufacturer decisions regarding the unit cooler fan level corresponding to any given compressor staging level and slightly better alignment of the test conditions to the compressor operating levels. However, it would require manufacturers to provide more information regarding selection of test conditions to clarify how models were tested and could be considered more burdensome by requiring calculation of test conditions. Depending on comments provided on this topic, DOE may consider adopting this approach of using the correlations for unit cooler and suction line trends instead of the

tabulated values for setting target test conditions.

Issue 25: DOE requests comment on whether DOE should set the target test conditions using correlations for unit cooler and suction line response to part-load operation rather than the proposed tabular approach.

b. Indoor Matched Pair and Single-Packaged Units

As discussed previously, AHRI 1250–2020 does not include test procedures or conditions for indoor variable or multiple-capacity units. As with dedicated condensing units, DOE proposes to adopt test methods for indoor matched pair and single-packaged dedicated systems. Testing of these systems and calculating AWEF for them would require parallel testing and AWEF calculations for outdoor matched systems, except that there is only one test condition and the AWEF calculation would be based only on that one condition. The details for required test conditions and calculations are presented in section 4.5.6 and Table 17 and Table 18 of this document showing the proposed regulatory text revisions.

Issue 26: DOE requests comment on its proposal to include in its test procedures instructions for testing and determining representations for indoor matched pair and single-packaged dedicated systems.

c. Revision to EER Calculation for Outdoor Variable-Capacity and Multiple-Capacity Refrigeration Systems

AHRI 1250–2020 includes test conditions and calculations to determine representations, specifically AWEF, for refrigeration systems having variable-capacity capability. The calculations use a quadratic equation for determining system EER for intermediate-capacity operation (see, e.g., Equations 76 through 84 of AHRI 1250–2020). DOE moved from the same quadratic approach for central air conditioners and heat pumps (“CAC/HP”) to a linear interpolation method due to concerns about potential inaccuracies of this method. 82 FR 1426, 1440–1441 (January 5, 2017). DOE proposes to make the same change when testing WICF refrigeration systems.

Issue 27: DOE requests comment on its proposal to modify the approach for calculating intermediate-capacity EER for variable-speed refrigeration systems.

d. Digital Compressors

Dedicated condensing units with digital compressors have been commercialized (see, e.g., EERE–2017–BT–TP–0010–0020). Digital compressor operation is discussed in the

introduction to section III.G.7 of this document. To clarify the proposed test procedure for digital compressors, DOE proposes to define the term “digital compressor” as a compressor that uses mechanical means for disengaging active compression on a cyclic basis to provide a reduced average refrigerant flow rate in response to an input signal.

DOE testing has shown that operating tolerances specified in AHRI 1250–2020 for certain parameters such as refrigerant pressure and mass flow can be exceeded when a digital compressor operates at part-load. Nevertheless, DOE testing has shown that the refrigerant enthalpy method for measuring capacity may still be quite accurate, as long as the liquid subcooling at the mass flow meter is sufficiently low, as required in Section C3.4.5 of AHRI 1250–2020. When conducting these tests, DOE used an integrating mass flow meter and measurement of temperature and pressure at a frequency of one measurement per second. DOE calculated capacity using refrigerant enthalpies determined based on test-period-average values of refrigerant temperature and pressure. When meeting the mass flow meter subcooling requirements, capacity balance with a separate calorimetric capacity measurement ranged from 0.2 to 4.1 percent.

Thus, DOE proposes that testing of refrigeration equipment with digital compressors operating at part-load may use the refrigerant enthalpy method as a secondary test method, with the following provisions and adjustments: (1) Pressure and temperature measurement would be at a frequency of once per second or faster, (2) the operating tolerances for pressure and temperature at both the inlet and outlet connections, and for mass flow would not apply, and (3) enthalpies determined for the capacity calculation would be based on test-period-average pressure and temperature values.

DOE proposes that the selection of the primary test method for measuring capacity would depend on the refrigeration system configuration. For single-packaged dedicated systems, the test methods proposed to be used as primary methods for any single-packaged dedicated system would be used (see discussion in section III.G.2 of this document). For matched pairs, the same test methods allowed as primary methods for single-packaged dedicated systems would be used. For dedicated condensing units, the primary methods that would be used would include outdoor air enthalpy method, balanced ambient outdoor calorimeter, and

outdoor room calorimeter measurements.

Issue 28: DOE requests comments on its proposals to address part-load testing for refrigeration systems with digital compressors.

8. Defrost

The April 2011 final rule referenced AHRI 1250–2009 as DOE’s WICF refrigeration system test procedure, including that standard’s requirement that both frosted and dry coil defrost tests be conducted. 81 FR 21580, 21597. DOE later noted in a supplemental notice of proposed rulemaking published on February 20, 2014 (“February 2014 SNOPR”) that these tests may be overly burdensome for manufacturers to conduct due to the difficulty of maintaining the moist air infiltration conditions for the frosted coil test in a repeatable manner. 79 FR 9818, 9831. Accordingly, in the May 2014 final rule, DOE adopted a set of nominal values for calculating defrost energy use for a frosted coil, number of defrosts per day if the unit has an adaptive defrost system, and daily contribution of heat load. 79 FR 27388, 27401. To address testing low-temperature dedicated condensing units alone, the May 2014 final rule established nominal values for the defrost energy use and thermal load. In addressing refrigeration systems with hot gas defrost, the May 2014 final rule established nominal values for calculating hot gas defrost energy use and heat load.⁵⁵ *Id.*

The December 2016 final rule removed the method for calculating the defrost energy and defrost heat load of systems with hot gas defrost and established a new method to evaluate hot gas defrost refrigeration systems. That new method treated hot gas defrost refrigeration systems as if they used electric defrost rather than hot gas defrost. This method relied on the same nominal values for defrost energy use and thermal load that the test procedure prescribes for electric-defrost dedicated condensing units that are tested alone. 81 FR 95758, 95774–95777. This approach was modified in the March 2021 final rule, which amended the DOE test procedure by rating hot gas defrost unit coolers using modified default values for energy use and heat load contributions that would make their ratings more consistent with those

of electric defrost unit coolers. 86 FR 16027. The scope of the March 2021 final rule is limited to unit coolers only. 86 FR 16027, 16030.

In the June 2021 test procedure (“TP”) RFI, DOE stated that it was considering whether to include a test method for determining the energy use associated with defrost and/or a test method to assess and confirm defrost adequacy. 86 FR 32332, 32347. DOE observed that any test method for determining defrost energy use and adequacy would have to provide consistent, repeatable methods for (1) delivering a frost load to the test coil and (2) measuring the thermal load released into the refrigerated space during the defrost cycle, regardless of the method of defrost (*e.g.*, electric or hot gas defrost), all while ensuring that the procedure provides results reflecting energy usage during a representative average use cycle and not be unduly burdensome to conduct. *Id.* DOE requested information on methods that might provide a measurable frost load and frost type to ensure repeatable defrost testing. Additionally, DOE requested data on typical frost loads and frost type, or information on the type and amount of testing that would be necessary to validate a method for evaluating frost loads and frost types during defrost testing. *Id.*

In response to DOE’s request for comment, Lennox, AHRI, National Refrigeration, and Hussmann recognized that although the injector system included in appendix E of AHRI 1250–2020 is an improvement, it remains a challenge to consistently build frost on an evaporator coil while minimizing interference with calorimeter systems. (Lennox No. 9 at p. 8; AHRI No. 11 at p. 13; National Refrigeration No. 17 at p. 2; Hussmann No. 18 at p. 15) Keeprite reiterated the technical difficulties associated with a moist-air loading approach. (Keeprite No. 12 at p. 2) Each of these stakeholders urged DOE to wait for the completion of ASHRAE research project WS 1831, “Validation of a Test Method for Applying a Standardized Frost Load on a Test Evaporator in a Test Chamber with an Operating Conditioning System” (“WS 1831”), before modifying its defrost test procedure. (Lennox No. 9 at p. 8; AHRI No. 11 at p. 13; National Refrigeration No. 17 at p. 2; Hussmann No. 18 at p. 15) ASAP also recognized the challenge associated with developing a test method to measure defrost energy (ASAP No. 13 at p. 2), while the CA IOUs agreed that AHRI 1250–2020 appendix E provides a good starting point for a universal defrost test but urged DOE to work with stakeholders to develop a test procedure for defrost that

⁵⁵ In a “hot gas” defrost system, high-temperature, high-pressure hot refrigerant gas from the discharge side of the compressor is introduced into the evaporator, where it condenses, thereby releasing latent heat into the evaporator. This heat is used to melt the frost that has accumulated on the outside of the evaporator coil.

could be used for all walk-in equipment. (CA IOUs No. 14 at p. 3) More specifically, the CA IOUs suggested that a test procedure for determining defrost energy consumption would vary the length and intensity of moisture injections to better represent field conditions. *Id.* Similarly, ASAP stressed that the ASRAC Working Group recommended incorporating a test method for measurement of defrost energy consumption and encouraged DOE to develop a future test method that better captures defrost energy use and performance for all defrost systems. (ASAP No. 13 at p. 2)

DOE recognizes that it is challenging to consistently build frost on an evaporator coil to assess a unit's defrost performance. In Section C11 of AHRI 1250–2009, the moisture to provide a frost load is introduced through the infiltration of air at a 75.2 °F dry-bulb temperature and a 64.4 °F wet-bulb temperature into the walk-in freezer at a constant airflow rate that depends on the refrigeration capacity of the tested freezer unit (equations C11 and C12 in Section C11.1.1 of AHRI 1250–2009). A key issue with this approach is the difficulty in ensuring repeatable frost development on the unit under test, despite specifying the infiltration air dry-bulb and wet-bulb temperatures. For example, in addition to frost accumulating on the evaporator of the unit under test, frost may also accumulate on the evaporator of other cooling equipment used to condition the room, which could subsequently affect the rate of frost accumulation on the unit under test (by affecting the amount of moisture remaining in the air).

In past ASHRAE-supported research, researchers created a frost load by introducing steam directly into the refrigerated space.⁵⁶ However, as discussed in 1094–RP, this approach can result in the suspension of ice crystals in the saturated room air and the formation of snow-like frost on the test coils. The researchers found that this snow-like frost degrades refrigeration system performance more, and is more difficult to defrost, than the ice-like frost that forms in sub-saturated air conditions. Both 622–RP and 1094–RP observed that a significant portion of the coil frost was converted to water vapor rather than melted during the

defrost cycle. This finding suggests that measuring the quantity of frost melt water mass may be a poor indicator of the frost load, since a significant portion of the frost would not be captured as melt water.⁶¹

DOE is aware that ASHRAE initiated project WS 1831 on September 2, 2021. The purpose of this research is to examine different approaches for applying a standardized, repeatable, full-frost accumulation (*i.e.*, accumulation of a frost quantity that would typically accumulate between defrosts during system operation in moist conditions) on evaporator coils so that the subsequent defrost test provides a representative indication of energy use associated with defrosting a frosted coil. Indirect methods for determining full frost load might include air side temperature, humidity, or pressure drop, refrigerant-side evaporation temperature or pressure, compressor or unit cooler fan power consumption, or the refrigerant-to-air or air-side inlet-to-outlet temperature difference.

Since the defrost test procedure in AHRI 1250–2009, section C11 has limitations, AHRI 1250–2020 does not include a frosted-coil test but does include provisions for a dry-coil defrost test.⁵⁷ Industry is currently evaluating how to create and validate consistent evaporator coil frost loads; therefore, DOE proposes to maintain the current calculation-based approach for estimating defrost energy consumption. Specifically, DOE proposes to incorporate by reference Section C10 of AHRI 1250–2020 for unit coolers with either electric or hot gas defrost.

In the June 2021 RFI, DOE requested comment on whether these and other updates to AHRI 1250–2020 would, if incorporated by DOE, result in additional testing burden. 86 FR 32332, 32336. Lennox, AHRI, Keeprite, and Hussmann recommended that DOE omit Section C10.2.1.1 of AHRI 1250–2020 from its test procedure since it does little to make the test procedure more representative but introduces technical challenges associated with air conditions during the dry coil defrost test. (Lennox No. 9 at p. 3; AHRI No. 11 at p. 5; Keeprite No. 12 at p. 1–3; Hussmann No. 18 at p. 6–7) Section C10.2.1.1 of AHRI 1250–2020 specifies that the general test condition tolerances

are not applicable but does require that the indoor entering dry-bulb temperature must be less than or equal to 4 °F and that air velocity in the vicinity of the test unit must not exceed 500 feet per minute. At this time, DOE does not have sufficient data to fully evaluate how these test room condition requirements during the dry coil defrost test would impact the representativeness of the test procedure relative to any potential additional test burden. DOE has tentatively decided not to incorporate Section C10.2.1.1 of AHRI 1250–but will instead continue to investigate this issue and may decide to include dry coil defrost operating tolerances in a later rulemaking. While DOE will continue to evaluate the dry coil defrost test room conditions, DOE emphasizes that it is proposing to incorporate the entirety of Section C10 of AHRI 1250–2020, “Defrost Calculation and Test Methods,” by reference, except for Section C10.2.1.1, “Test Room Conditioning Equipment.”

In the following sections, DOE discusses relevant stakeholder comments and additional proposals for adaptive defrost and hot gas defrost.

a. Adaptive Defrost

Adaptive defrost refers to a factory-installed defrost control system that reduces defrost frequency by initiating defrosts or adjusting the number of defrosts per day in response to operating conditions rather than initiating defrost strictly based on compressor run time or clock time. 10 CFR 431.303. In the December 2016 final rule, DOE established an approach to address systems with adaptive defrost. 81 FR 95758, 95777. This approach requires that adaptive defrost features are deactivated during certification testing; *i.e.*, for certification, units are tested as if they do not have adaptive defrost. See subpart R, appendix C, section 3.3.5. However, DOE's current approach also allows the energy saving benefits of adaptive defrost to be displayed in public representations and marketing material (but not for certification purposes). *Id.* To represent the benefits of adaptive defrost, a calculation method is provided that allows the unit under test to reduce its number of defrosts per day (“N_{DF}”) to the average of its daily dry coil and frosted coil defrosts (typically 1 and 4, respectively, for an average of 2.5), rather than basing N_{DF} on the number of frosted coil defrosts per day (typically 4). *Id.* DOE's current approach applies to all refrigeration system configurations (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone).

⁵⁶ Sherif, S.A., P.J. Mago, and R.S. Theen. *A Study to Determine Heat Loads Due to Coil Defrosting*. 1997. University of Florida: Gainesville, FL. ASHRAE Project No. 622–RP. Report No. UFME/SEECLEEE–9701 (“622–RP”) and Sherif, S.A., P.J. Mago, and R.S. Theen. *A Study to Determine Heat Loads Due to Coil Defrosting-Phase II*. 2003. University of Florida: Gainesville, FL. ASHRAE Project No. 1094–RP. Report No. UFME/SEECLEEE–200201 (“1094–RP”).

⁵⁷ AHRI 1250–2020 includes an adaptive defrost challenge test in appendix E (“Appendix E”) and a hot gas defrost challenge test in appendix F (“Appendix F”) that require a frosted coil. The tests in both of these appendices are labelled as “informative,” and were designed to evaluate adaptive defrost or hot gas defrost functionality, respectively, rather than to quantify defrost energy use.

In the June 2021 TP RFI, DOE observed that a test method to evaluate the impact of adaptive defrost must evaluate (1) whether a system waits too long to defrost (*i.e.*, too much frost builds up on the coils, which impacts on-cycle performance) and (2) if the system defrosts more than four times per day, which is typical for a conventional timed defrost. 86 FR 32332, 32348. DOE requested comment on how the performance of adaptive defrost systems should be accounted for in the walk-in test procedure and which refrigeration systems (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone) should be eligible for a potential adaptive defrost test procedure. Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann stated that adaptive defrost is most prevalent in matched pairs and that it would be necessary to match unit coolers and dedicated condensing units to realize adaptive defrost. (Lennox, No. 9 at p. 9; AHRI, No. 11 at p. 14; Keeprite, No. 12 at p. 2; National Refrigeration, No. 17 at p. 2; Hussmann, No. 18 at p. 16) The CA IOUs encouraged DOE to develop a test to measure the performance benefits of adaptive defrost. (CA IOUs, No. 14 at p. 3) While the CA IOUs stated that Appendix E of AHRI 1250–2020 provides a good starting point for a defrost test, they suggested that the addition of moisture as a static load of 0.5 pounds per hour per 1,000 Btu per hour in Appendix E does not evaluate the full capability of most adaptive defrost systems and does not sufficiently differentiate between adaptive control strategies. (CA IOUs, No. 14 at p. 3)

DOE also requested data showing the performance of adaptive defrost systems relative to non-controlled defrost systems, data showing the impact of adaptive defrost to on-cycle operation, and data demonstrating seasonal or daily frosting patterns for walk-in applications. 86 FR 32332, 32348. In response, the CA IOUs shared test results from adaptive defrost control systems installed in the field which show between 0 and 30 percent energy savings compared to baseline systems with no adaptive defrost control. (CA IOUs, No. 14 at p. 3) Accordingly, the CA IOUs encouraged DOE to consider varying the length and intensity of moisture injections to better represent in-field frost load and differentiate between control strategies. *Id.*

DOE recognizes the need to develop a representative and repeatable test method for evaluating adaptive defrost performance, and notes that appendix E may be an appropriate starting point.

DOE also acknowledges that industry is invested in developing an adaptive defrost test procedure and that the ASHRAE WS 1831 research project must be completed in order to understand how to best form a representative and uniform layer of frost on the defrost coil. DOE appreciates the information provided by the CA IOUs and will consider it in its development and/or evaluation of any newly developed test procedure for quantifying the energy use of adaptive defrost. After considering the stakeholder comments received, DOE proposes to maintain the current regulatory approach that reduces the number of defrosts per day in the AWEF calculation from 4.0 to 2.5, for adaptive defrost systems. DOE also proposes to maintain its approach where AWEF calculated using the adaptive defrost credit (*i.e.*, using 2.5 defrosts per day, rather than 4.0) may be used for representation purposes only, and may not be used when calculating AWEF for compliance with DOE energy conservation standards. DOE also proposes to maintain its current approach, in which the adaptive defrost calculation method is applicable to all refrigeration system configurations (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone). Finally, DOE notes that use of the adaptive defrost credit for representation purposes only would continue to apply only to factory-installed defrost control systems. Overall, the optional adaptive defrost strategy that DOE is proposing for representation purposes can be summarized as follows:

- The adaptive defrost calculation method (*i.e.*, the adaptive defrost “credit”) may be used only for representation purposes, and may not be used to calculate AWEF for compliance purposes.
- All refrigeration system configurations (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone) may use the adaptive defrost calculation method for representation purposes.
- Refrigeration systems may use the adaptive defrost calculation method for representation purposes only if the adaptive defrost controller is distributed in commerce with the refrigeration system.

b. Hot Gas Defrost

As discussed previously, the March 2021 final rule amended the test procedure to rate hot gas defrost unit coolers using modified default values for energy use and heat load contributions that would make their

ratings more consistent with those of electric defrost unit coolers but is limited to unit coolers only. 86 FR 16027, 16030.

In the June 2021 TP RFI, DOE discussed that it was interested in obtaining feedback on the most practicable method for measuring hot gas defrost performance. 86 FR 32332, 32347. DOE recognized that in order to assess the energy performance of a defrost cycle, the test procedure must measure both the energy consumed and the heat released into the refrigerated space by the defrost system. *Id.* DOE further discussed that for hot gas defrost systems, unlike electric resistance heating systems, the energy consumed and the heat released are not equivalent, which makes the current electric defrost test procedure outlined in AHRI 1250–2009 inappropriate for hot gas defrost systems. *Id.*

DOE stated that it is not aware of a test method that can reliably be used to directly measure the thermal impact of hot gas defrost without a substantial increase in test burden and mentioned that it was therefore considering the use of a calculation method. *Id.* Rather than measure the energy used and heat released into the refrigerated space for the unit-under-test, the energy use and heat load could be calculated as a function of the refrigeration system’s steady state capacity. *Id.* DOE further discussed that the energy use and heat load to capacity relationships could be defined based on test data from actual hot gas defrost systems. *Id.* DOE recognized that AHRI has developed a calculation method to represent hot gas defrost heat load and energy use contributions. *Id.* This method is provided in Section C10.1 of AHRI 1250–2020 and prescribes equations to represent energy use and heat addition associated with defrost for different system configurations (matched pair, single-packaged dedicated, unit cooler, condensing unit) and considers whether hot gas is used only to defrost the evaporator or whether it also maintains warm temperatures in the drip pan.

Finally, DOE discussed that if it were to amend its walk-in refrigeration systems test procedure to account for hot gas defrost energy consumption and heat load, DOE would need to decide if all refrigeration system configurations (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone) would be subject to a hot gas defrost-specific test procedure. *Id.*

In their comments, AHRI, Lennox, Keeprite, Hussmann, and National Refrigeration each recommended that DOE utilize the AHRI 1250–2020 hot gas defrost calculations for all equipment

types, since matched pairs, unit coolers, and dedicated condensing units may be associated with hot gas defrost. (AHRI, No. 11 at pp. 13–14; Lennox, No. 9 at pp. 8–9; Keeprite, No. 12 at p. 2; Hussmann, No. 18 at pp. 15–16; National Refrigeration, No. 17 at p. 2) ASAP also supported the adoption of the hot gas defrost calculations in AHRI 1250–2020 but did not specify for which equipment systems. (ASAP, No. 13 at p. 2) NEEA observed that AHRI 1250–2020 provides both a calculation approach and a test method to account for hot gas defrost energy and recommended that DOE proceed with the hot gas defrost calculations in AHRI 1250–2020 in addition to including the hot gas defrost challenge test in Appendix F of AHRI 1250–2020. (NEEA, No. 16 at p. 3) In spite of its inability to capture frost load conditions, the CA IOUs nevertheless supported the use of AHRI 1250–2020 Appendix F since it captures hot gas defrost energy use. (CA IOUs, No. 14 at p. 2) Both NEEA and the CA IOUs observed that additional work is needed to develop a robust test method to evaluate how hot gas defrost impacts equipment energy consumption and NEEA recommended that DOE continue to work with industry groups to develop such a procedure. (NEEA, No. 16 at p. 3; CA IOUs, No. 14 at p. 2)

After reviewing the comments submitted by AHRI, Lennox, Keeprite, Hussmann and National Refrigeration, DOE has tentatively determined that all refrigeration system configurations (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone) can benefit from hot gas defrost. For this reason, DOE proposes that all system configurations (when equipped with hot gas defrost) should be eligible for a hot gas defrost “credit,” which will be discussed in more detail in the following paragraphs.

As discussed previously, there is currently no industry-accepted test method that can measure the heat load addition coming from hot gas defrost operation. In the absence of such a method, DOE is not able to propose a hot gas defrost testing-based method at this time. However, if the walk-in industry develops such a method in the future, DOE may evaluate that method’s appropriateness in a future rulemaking.

While all stakeholders support a calculation-based approach using the hot gas defrost equations in AHRI 1250–2020, DOE’s goal in the December 2016 final rule was to provide calculations for rating hot gas defrost unit coolers using modified default values for energy use and heat load contributions that would make their ratings more consistent with those of electric defrost unit coolers. 81

FR 95758, 95776. The March 2021 final rule sought to maintain this consistency between units configured with hot gas defrost or electric defrost and ultimately included the equations in Section C10.2 of AHRI 1250–2020 for representing the defrost energy use and thermal load associated with hot gas defrost systems. 86 FR 16027, 16032. DOE proposes to maintain this calculation equivalence between hot gas defrost and electric defrost systems. Specifically, for rating and certification, all walk-in refrigeration systems would utilize the default values for energy use and heat load for dedicated condensing units tested alone with electric defrost systems. AHRI 1250–2020, Section 10.2.2.

However, like the approach discussed previously for adaptive defrost systems, DOE is proposing that manufacturers may account for a unit’s potential improved performance with hot gas defrost in its market representations. In other words, DOE proposes that manufacturers may apply a hot gas defrost “credit” in their market representations but must certify hot gas defrost units using the default electric defrost equations. As mentioned previously, AHRI has developed specific equations for determining the defrost energy and heat load associated with hot gas defrost. AHRI 1250–2020, Section C10.1. DOE proposes that the hot gas defrost “credit” may be used in marketing materials for all refrigeration system configurations sold with hot gas defrost (*i.e.*, matched pairs, unit coolers tested alone, and dedicated condensing units tested alone).

9. Refrigerant Glide

In the June 2021 RFI, DOE discussed that it was considering changing its test procedure to a more refrigerant-neutral approach—specifically, DOE discussed that it was considering approaches that would more accurately represent the performance of zero-, low-, and high-glide refrigerants. 86 FR 32332, 32351. Refrigerant glide refers to the increase in temperature at a fixed pressure as liquid refrigerant vaporizes during its conversion from saturated liquid (at its bubble point) to saturated vapor (at its dew point). R–404A—a common walk-in refrigerant—has very little glide, while R–407A—another common walk-in refrigerant—can exhibit glide of up to 8 °F.⁵⁸

⁵⁸ As noted in the June 2021 RFI, on July 20, 2015, the U.S. Environmental Protection Agency (“EPA”) published a final rule under the Significant New Alternatives Policy (“SNAP”) program listing the use of certain hydrofluorocarbons (“HFCs”) as unacceptable, including the use of R–404A in WICF refrigeration systems. 80 FR 42870 (“July 2015 EPA

The current DOE test procedure specifies unit cooler test conditions based on the dew point at the evaporator exit. For zero-glide refrigerants, the average evaporator temperature will typically be equivalent to the specified dew point. However, for high-glide refrigerants, the average evaporator temperature will be significantly lower than the dew point since the refrigerant temperature will increase (up to the dew point) as it travels through the evaporator. As a result, two identical unit coolers, one charged with R–404A and one with R–407A, will be tested at different evaporator-to-air temperature differences (“TD”), but with the same evaporator airflow. Measured capacity is directly correlated with the product of TD and airflow; therefore, the high-glide R–407A unit cooler would achieve a higher rated capacity than the R–404A unit cooler. However, this capacity difference is an artifact of the test procedure, which requires that unit coolers and dedicated condensing units be tested alone. In the field, a unit cooler will be paired with a dedicated condensing unit and R–407A unit coolers will not actually provide additional capacity when compared to their R–404A counterparts.

For these reasons, the current test procedure is not refrigerant-neutral. In the June 2021 RFI, DOE discussed the possibility of pursuing a modified midpoint approach, which DOE believed may be more refrigerant-neutral. 86 FR 32332, 32355. The modified midpoint approach attempts to standardize the average evaporator

SNAP Rule”). On December 1, 2016, EPA published a final rule (“December 2016 EPA SNAP Rule”) which listed a number of refrigerants, including R–407A, for use in certain refrigerant applications as unacceptable starting January 1, 2023 for cold storage warehouse application, and January 1, 2021, for retail food refrigerant applications. 81 FR 86778. In August 2017, the U.S. Court of Appeals for the District of Columbia Circuit vacated and remanded the July 2015 EPA SNAP Rule to the extent that it required manufacturers to replace HFCs with a substitute substance. (*Mexichem Fluor, Inc. v. EPA*, Case No. 15–1328 (D.C. Cir. August 8, 2017)) A petition for rehearing has been filed by a number of parties. (D.C. Cir., Consolidated Case Nos. 15–1328, 15–1329). That petition for rehearing was denied on January 26, 2018.

Additionally, in October 2016, the 28th Meeting of the Parties to the Montreal Protocol adopted the Kigali Amendment on HFCs. The Kigali Amendment enters into force on January 1, 2019, and it requires parties to the protocol to reduce consumption and production of HFCs. DOE understands that, while the United States has not yet ratified the Kigali Amendment, a significant portion of WICFs currently use HFC-based refrigerants and may become affected by this Amendment to the Montreal Protocol.

DOE plans to consider the potential impact of the court’s decision and the Amendment to the Montreal Protocol in this rulemaking as appropriate.

temperature, rather than standardizing the evaporator dew point. In doing so, identical unit coolers using zero- and high-glide refrigerants would exhibit identical TDs, thus alleviating concerns of overstated capacity. DOE requested comment on the appropriateness of a modified midpoint approach and how such a method could be implemented in the June 2021 RFI. 86 FR 32332, 32355. Lennox, AHRI, Keeprite, National Refrigeration, and Hussmann recommended maintaining the current dew point approach since dewpoint is measurable and the approach is accepted in the industry. (Lennox, No. 9 at p. 11; AHRI, No. 11 at p. 16; Keeprite, No. 12 at p. 3; National Refrigeration, No. 17 at p. 2; Hussmann, No. 18 at p. 20) Lennox, AHRI, and Hussmann also stated that dew point is a required reference for dual instrumentation evaporator superheat calculations and can be measured during installation and service. (Lennox, No. 9 at p. 11; AHRI, No. 11 at p. 16; Hussmann, No. 18 at p. 20) Keeprite claimed that a midpoint or corrected midpoint approach is unproven and is not measurable. (Keeprite, No. 12 at p. 3) Keeprite additionally added that a change from dewpoint to midpoint may have large effects on unit cooler AWEF values. *Id.* Daikin stated that engineers use the mean value between dew point and bubble point when designing refrigeration systems since this approach simplifies energy calculations. (Daikin, No. 17 at p. 4)

DOE acknowledges the potential increased testing burden highlighted by manufacturers if a modified midpoint were to be adopted. In response to these comments DOE proposes to continue to use dewpoint throughout the test procedure but will continue to evaluate the potential for using a midpoint in testing.

10. Refrigerant Temperature and Pressure Instrumentation Locations

In the June 2021 RFI, DOE requested comment on changes between AHRI 1250–2020 and AHRI 1250–2009 which may impact the determination of AWEF or increase the testing burden. 86 FR 32332, 32336. In response to this request AHRI, Lennox, and Hussmann stated that the test set-up for DX Dual instrumentation method for testing dedicated condensing units alone has changed, represented by Figure C1 in AHRI 1250–2009, and the new Figure C2 in AHRI 1250–2020. The commenters stated that this changes the location of the instrumentation for pressure and temperature measurement. Additionally, they stated that the new method removes the alternative location

of the second mass flow meter and claim that both sets of changes necessitate changes in lab test stands. Further, the commenters claimed that AHRI 1250–2020 added a change to the refrigeration capacity calculation for dedicated condensing units, whereby the enthalpy representing the refrigerant at the evaporator exit condition has changed such that it is based on a pressure corresponding to a dew point 2 °F higher than at the condensing unit inlet and a superheat of 6.5 °F. (Lennox, No. 9 at p. 3; AHRI, No. 11 at p. 5; Hussmann, No. 18 at p. 7) The same group of commenters stated these locations are now different than those specified for matched pair testing, and the DX Calibrated Box method. *Id.*

DOE notes first that AHRI 1250–2009 does not provide a test method for dedicated condensing units tested alone, other than incorporating by reference ASHRAE 23–2005 (*see* Section C12 of AHRI 1250–2009 appendix C). ASHRAE 23 calls for calculating capacity by multiplying the refrigerant mass flow rate by the difference in enthalpies. However, the current DOE test procedure clarifies which values of pressure and temperature are used to determine the enthalpies to use for this capacity calculation—this is specified in section 3.4.2.1 of subpart R, appendix C. The section indicates that, for enthalpy leaving the unit cooler, the calculation uses a pressure corresponding to a dew point temperature of 25 °F and a temperature of 35 °F for coolers, and a dew point of –20 °F and temperature of –14 °F for freezers. These dew points are identical to the dew points specified in AHRI 1250–2020.⁵⁹ The temperatures represent superheat levels equal to 10 °F for coolers and 6 °F for freezers, which are different than the 6.5 °F specified in Section C7.5.2 of AHRI 1250–2020. Section 3.4.2.1 of subpart R, appendix C, also indicates that in the current DOE test procedure, the measured enthalpy at the condensing unit exit shall be used as the enthalpy entering the unit cooler. This is consistent with Figure C2 and Section C7.5.1.1.2 of AHRI 1250–2020. Thus, the only difference in AHRI 1250–2020 affecting the dedicated condensing unit efficiency calculations is the change in specified superheat, and there is no effective difference in the location of required pressure and temperature measurements. DOE will address the calculation change and other test

⁵⁹ For example, for coolers, Tables 12 and 13 of AHRI 1250–2020 require that CDU suction dew point be 23 °F, while section C7.5.2 indicates that the enthalpy to use in the calculation of capacity shall be for a pressure corresponding to dew point 2 °F higher than for the recorded pressure at the inlet of the dedicated condensing unit.

procedure changes that can alter the measurement in an energy conservation standards rulemaking.

The comments of AHRI, Lennox, and Hussmann also address the test burden of not allowing the use of the alternative second location of the mass flow meter. (AHRI, No. 11 at pp. 5–6; Lennox, No. 9 at p. 3; Hussmann, No. 18 at p. 7) The comments provided no indication that use of a mass flow meter in the suction line should not be allowed. Hence, DOE proposes to clarify that the location of the second mass flow meter in the suction line would still be allowed. This proposal would eliminate the potential costs associated with Figure C2's suggestion that use of a suction line mass flow meter is not allowed.

Issue 29: DOE requests comment on its proposal to clarify that the second mass flow measurement for the DX Dual Instrumentation method may be in the suction line upstream of the inlet to the condensing unit, as shown in Figure C1 of AHRI 1250–2009.

11. Updates to Default Values for Unit Cooler Parameters

For dedicated condensing units tested alone, the current DOE test procedure calculates on-cycle evaporator fan power based on the cooling capacity of the condensing unit. This is necessary as a dedicated condensing unit tested alone will have no measured value for evaporator fan power. The on-cycle evaporator fan power is set equal to a fraction of the gross cooling capacity. The fraction is specified by a coefficient of .013 for medium temperature coolers and a coefficient of .016 for low temperature coolers. These coefficients were a product of the 2016 rulemaking negotiations. As discussed in section III.B.3.c, Sections 7.9.1 and 7.9.2 of AHRI 1250–2020 add new equations to calculate on-cycle evaporator fan power when testing a dedicated condensing unit alone. These equations are different from those in the current test procedure at subpart R, appendix C. The equations in AHRI 1250–2020 are split based on low versus medium temperature dedicated condensing units, and the capacity of the dedicated condensing units. Those units over 50,000 Btu/h have one equation and those under 50,000 Btu/h that capacity have another, resulting in 4 equations total. These equations are based on more test data and analysis than those currently in subpart R, appendix C. DOE has tentatively determined that these equations would be more representative, and do not pose a greater test burden. Therefore, DOE proposes to adopt the calculations for on-cycle evaporator fan

power for dedicated condensing units tested alone in AHRI 1250–2020.

Issue 30: DOE requests comment on its proposal to adopt the calculations for evaporator fan power in AHRI 1250–2020.

12. Calculations and Rounding

To ensure greater test procedure consistency, DOE is proposing to include rounding requirements for AWEF and capacity in the newly proposed appendix C1. DOE notes that AHRI 1250–2020 does not include requirements for rounding these values. DOE recognizes that the manner in which values are rounded can affect the resulting capacity and AWEF values. To ensure consistency in the manner in which capacity and AWEF values are calculated, DOE is proposing that raw measured data would be used in all capacity and AWEF calculations. DOE’s current standards specify a minimum AWEF value in Btu/(W–h) to the hundredths place; therefore, DOE is proposing that AWEF values would be rounded to the nearest 0.05 Btu/(W–h). To round capacity, DOE is proposing to round to the nearest multiple as specified in Table III.14. The proposed capacity bins and multiples are consistent with other HVAC test procedures.⁶⁰

TABLE III.14—REFRIGERATION CAPACITY RATING RANGES AND THEIR ROUNDING MULTIPLES

Refrigeration capacity ratings, 1,000 Btu/h	Multiples, Btu/h
<20	100
≥20 and <38	200
≥38 and <65	500
≥65	1,000

Issue 31: DOE requests comment on its proposal for rounding AWEF to the nearest 0.05 Btu/(W–h) and rounding capacity values to the nearest multiple as presented in Table III.14.

H. Alternative Efficiency Determination Methods

Pursuant to the requirements of 10 CFR 429.70, DOE may permit use of an alternative efficiency determination method (“AEDM”) in lieu of testing equipment for which testing burden may be considerable and for which that equipment’s energy efficiency performance may be well predicted by such alternative methods. Although specific requirements vary by product or

equipment, use of an AEDM entails development of a mathematical model that estimates energy efficiency or energy consumption characteristics of the basic model, as would be measured by the applicable DOE test procedure. The AEDM must be based on engineering or statistical analysis, computer simulation or modeling, or other analytic evaluation of performance data. A manufacturer must perform validation of an AEDM by demonstrating that the performance, as predicted by the AEDM, is in agreement with the performance as measured by actual testing in accordance with the applicable DOE test procedure. The validation procedure and requirements, including the statistical tolerance, number of basic models, and number of units tested vary by product or equipment.

Once developed, an AEDM may be used to rate and certify the performance of untested basic models in lieu of physical testing. However, use of an AEDM for any basic model is always at the option of the manufacturer. One potential advantage of AEDM use is that it may free a manufacturer from the burden of physical testing. One potential risk is that the AEDM may not perfectly predict performance, and the manufacturer could be found responsible for having an invalid rating for the equipment in question or for having distributed a noncompliant basic model. The manufacturer, by using an AEDM, bears the responsibility and risk of the validity of the ratings. For walk-ins, DOE currently permits the use of AEDMs for refrigeration systems only. 10 CFR 429.70(f).

The following sections discuss DOE’s proposal to allow walk-in door manufacturers to use AEDMs to rate both display and non-display doors, as well as proposed updates to the current AEDM provisions for refrigeration systems.

1. Doors

DOE did not adopt provisions allowing for the use of AEDMs for walk-in doors in the May 2014 rule because DOE found that the modeling techniques approved for use in the NFRC 100 test procedure (incorporated by reference at 10 CFR 431.303) made a parallel AEDM provision for walk-in doors unnecessary. 79 FR 27388, 27394. Consistent with DOE’s proposal to remove reference to NFRC 100 (and thus the computational method) for determining U-factor of doors, DOE is proposing to allow the use of AEDMs to determine the represented value of energy consumption of walk-in doors at 10 CFR 429.53(a)(3). Correspondingly,

DOE is proposing to expand the AEDM provisions in 10 CFR 429.70(f) to apply to walk-in doors. DOE is proposing to include a 5 percent individual model tolerance, which aligns with the individual model tolerance applicable to walk-in refrigeration systems, to validate the energy consumption result of an AEDM with the appendix A test result at 10 CFR 429.70(f)(2)(ii). DOE also proposes that an AEDM for doors may not simulate or model components of the door that are not required to be tested by the DOE test procedure. If the test results used to validate the AEDM are for the U-factor test of the door, the AEDM must estimate the daily energy consumption—specifically, the conduction thermal load, and the direct and indirect electrical energy consumption, by using the nominal values (e.g., EER values used for coolers and freezers, PTO values) and calculation procedure specified in the DOE test procedure. Additionally, DOE is proposing to include walk-in door validation classes at 10 CFR 429.70(f)(2)(iv) and to require that two basic models per validation class be tested using the proposed test procedure in appendix A, which is consistent with the number of basic models required to be tested per validation class for walk-in refrigeration systems. Lastly, DOE is proposing to include a 5 percent tolerance applicable to the maximum daily energy consumption metric for AEDM verification testing at 10 CFR 429.70(f)(5)(vi), which aligns with the tolerance applicable to AWEF of walk-in refrigeration systems.

Issue 32: DOE seeks comment on its proposal to allow for the use of AEDMs to determine the energy consumption rating of walk-in doors. DOE requests specific feedback on the proposed 5 percent model tolerance for validating an AEDM, the proposed validation classes and number of basic models required to be tested per validation class, and the proposed 5 percent tolerance on the result from a DOE AEDM verification test.

2. Refrigeration Systems

In the May 2014 final rule, DOE established that AEDMs can be used by manufacturers of refrigeration systems, once certain qualifications are met, to certify compliance and report ratings. 79 FR 27388, 27389. That rule established a uniform, systematic, and fair approach to the use of these types of modeling techniques that has enabled DOE to ensure that products in the marketplace are correctly rated—irrespective of whether they are subject to actual physical testing or are rated using

⁶⁰ A version of Table III.9 can be found in AHRI Standard 390 I–P (2021) “Performance Rating of Single-packaged Vertical Air-Conditioners and Heat Pumps.”

modeling—without unnecessarily burdening regulated entities. *Id.*

A minimum of two distinct models must be tested to validate an AEDM for each validation class. The May 2014 final rule established the following AEDM validation classes for walk-ins:

- Dedicated condensing units, medium temperature, indoor system;
- Dedicated condensing units, medium temperature, outdoor system;
- Dedicated condensing units, low temperature, indoor system;
- Dedicated condensing units, low temperature, outdoor system;
- Unit cooler connected to a multiplex condensing unit, medium temperature;
- Unit cooler connected to a multiplex condensing unit, low temperature;
- Medium temperature, indoor condensing unit;
- Medium temperature, outdoor condensing unit;
- Low temperature, indoor condensing unit;
- Low temperature, outdoor condensing unit.

See 79 FR 27388, 27411 (codified at 10 CFR 429.70(f)(5)(iv)).

In this NOPR, DOE is proposing new test procedures for single-packaged refrigeration systems, high-temperature refrigeration systems, and CO₂ unit coolers. Temperature has a significant impact on equipment performance; therefore, DOE is proposing to incorporate new AEDM validation classes for all high-temperature refrigeration systems (dedicated condensing units, single-packaged dedicated systems, and matched pair systems). Additionally, single-packaged units are expected to perform differently than dedicated condensing units under the proposed test procedure which incorporates thermal losses. Therefore, DOE proposes to create new validation classes for low-temperature, medium-temperature, and high-temperature single-packaged dedicated systems. To ensure that walk-in validation classes are consistent with DOE's current walk-in terminology, DOE proposes to rename the "unit cooler connected to a multiplex condensing unit" validation classes to "unit cooler" at either medium- or low-temperature; however, the AEDM requirements for these classes remain the same. Finally, DOE proposes to remove the medium/low temperature indoor/outdoor condensing unit validation classes, as these are redundant with the medium/low temperature indoor/outdoor dedicated condensing unit validation classes.

As discussed, DOE proposes to reference in appendix C1 the methods of test for single-packaged dedicated

systems in Section C9 of AHRI 1250–2020, with some modifications.

Implementation of appendix C1, if finalized, would require that all AEDMs for single-packaged dedicated systems are amended to be consistent with the test procedure proposed in appendix C1.

In summary, DOE is proposing the following AEDM validation classes for walk-in refrigeration equipment:

- Dedicated Condensing Unit, Medium Temperature, Indoor System
- Dedicated Condensing Unit, Medium Temperature, Outdoor System
- Dedicated Condensing Unit, Low Temperature, Indoor System
- Dedicated Condensing Unit, Low Temperature, Outdoor System
- Single-packaged Dedicated System, High-temperature, Indoor System
- Single-packaged Dedicated System, High-temperature, Outdoor System
- Single-packaged Dedicated System, Medium Temperature, Indoor System
- Single-packaged Dedicated System, Medium Temperature, Outdoor System
- Single-packaged Dedicated System, Low Temperature, Indoor System
- Single-packaged Dedicated System, Low Temperature, Outdoor System
- Matched Pair, High-temperature, Indoor Condensing Unit
- Matched Pair, High-temperature, Outdoor Condensing Unit
- Matched Pair, Medium Temperature, Indoor Condensing Unit
- Matched Pair, Medium Temperature, Outdoor Condensing Unit
- Matched Pair, Low Temperature, Indoor Condensing Unit
- Matched Pair, Low Temperature, Outdoor Condensing Unit
- Unit Cooler, High-temperature
- Unit Cooler, Medium Temperature
- Unit Cooler, Low Temperature

DOE would maintain its provision that outdoor models that are within a given validation class may be used to determine represented values for the corresponding indoor class, and additional validation testing is not required. For example, two dedicated condensing unit, medium temperature, outdoor systems may be used to validate an AEDM for both the "Dedicated Condensing Unit, Medium Temperature, Outdoor System" class and the "Dedicated Condensing Units, Medium Temperature, Indoor System" class. If indoor models that fall within a given validation class are tested and used to validate an indoor AEDM, they may only be used for that validation class.

DOE is proposing no additional modifications to the provisions within 10 CFR 429.70(f).

Issue 33: DOE seeks comment on its proposal to modify and extend its

AEDM validation classes for refrigeration systems, consistent with the test procedure revisions discussed in this document.

I. Sampling Plan for Enforcement Testing

When DOE conducts enforcement testing of equipment, DOE uses one of the enforcement sampling plans in appendix A or B to subpart C of 10 CFR part 429 to calculate upper control limits and lower control limits around the standard value based on the standard deviation of the test sample. These statistics are applied to the test results in the sample to determine compliance or non-compliance. DOE uses appendix B to subpart C of 10 CFR part 429 to assess compliance for walk-in refrigeration systems, which is specifically intended for use for covered equipment and certain low-volume covered products. 10 CFR 429.110(e)(2). DOE does not specifically call out which appendix in subpart C of 10 CFR part 429 it uses for determination of compliance for walk-in doors or walk-in panels. In an Enforcement NOPR published on August 31, 2020 ("August 2020 Enforcement NOPR"), DOE proposed to add walk-in cooler and freezer doors and panels to the list of equipment subject to the low-volume enforcement sampling procedures in appendix B to subpart C of 10 CFR part 429. 85 FR 53691, 53696. DOE noted that this equipment is not currently included within DOE's list because when the current regulations were drafted, walk-in doors and walk-in panels did not have applicable performance standards, only design standards, and therefore sampling provisions were not necessary at the time. *Id.* DOE did not receive any comments in response to this proposal in the August 2020 Enforcement NOPR. DOE is therefore proposing in this document to include walk-in doors and walk-in panels in the list of low-volume products 10 CFR 429.110(e)(2).

Issue 34: DOE requests comment on its proposal to apply the low-volume sampling procedures in appendix B of subpart C of 10 CFR part 429 to walk-in doors and panels.

J. Test Procedure Costs and Impact

EPCA requires that test procedures proposed by DOE be reasonably designed to produce test results which reflect energy efficiency and energy use of a type of industrial equipment during a representative average use cycle and not be unduly burdensome to conduct. (42 U.S.C. 6314(a)(2)) The following sections discuss DOE's evaluation of the estimated costs and savings associated

with the amendments proposed in this NOPR. The following sections outline the potential costs and savings differentiated by WICF component: Doors, panels, and refrigeration systems.

1. Doors

In this NOPR, DOE proposes the following amendments to the test procedures for walk-in cooler and freezer doors:

1. Referencing NFRC 102–2020 for the determination of U-factor;
2. Including AEDM⁶¹ provisions for manufacturers to alternately determine the total energy consumption of display and non-display doors;
3. Providing additional detail for determining the area used to convert U-factor into conduction load, A_s , to differentiate it from the area used to determine compliance with the standards, A_{dd} or A_{nd} ; and
4. Specifying a PTO value of 97 percent for door motors.

Items 1 and 3, referencing NFRC 102–2020 and additional detail on the area used to convert U-factor into a conduction load, improves the consistency, reproducibility, and representativeness of test procedure results. Item 2, including AEDM provisions, intends to provide manufacturers with the flexibility to use an alternative method that gives the best agreement for their doors. Item 4, by proposing to include a PTO value of 97 percent, intends to provide a more representative and consistent means for comparison of walk-in door performance for doors with motors.

DOE has tentatively determined that these proposed amendments would improve the representativeness, accuracy, and reproducibility of the test results, and would not be unduly burdensome for door manufacturers to conduct. DOE has also tentatively determined that these proposed amendments would not increase testing costs per basic model relative to the current DOE test procedure in appendix A, which DOE estimates to be \$10,000 for third-party labs to determine energy consumption of a walk-in door, including physical U-factor testing per NFRC 102–2020.⁶² DOE has tentatively

determined that manufacturers would not be required to redesign any of the covered equipment or change how the equipment is manufactured, solely as result of the proposed amendments, if finalized.

The cost impact to manufacturers as a result of the reference to NFRC 102–2020 and inclusion of AEDM provisions is dependent on the agreement between tested and simulated values as specified in Section 4.7.1 of NFRC 100⁶³ as referenced in the current test procedure. For manufacturers of doors that have been able to achieve the specified agreement between U-factors simulated using the method in NFRC 100 and U-factors tested using NFRC 102, manufacturers would be able to continue using the simulation method in NFRC 100, provided that the simulation method also meets the basic requirements proposed for an AEDM in 10 CFR 429.53 and 10 CFR 429.70(f).

For manufacturers of doors that have not been able to achieve the specified agreement between U-factors simulated using the method in NFRC 100 and U-factors tested using NFRC 102, DOE estimates that the test burden would decrease. Under the current requirements, manufacturers may be required to determine U-factor through physical testing of every basic model. If the proposed test procedure were to be adopted, manufacturers who would have otherwise been required to physically test every walk-in door basic model could develop an AEDM for rating their basic models of walk-in doors consistent with the proposed provisions in 10 CFR 429.53 and 10 CFR 429.70(f). DOE estimates the per-manufacturer cost to develop and validate an AEDM for a single validation class of walk-in doors to be \$11,100. DOE estimates an additional cost to determine energy consumption of a walk-in door using an AEDM to be \$46 per basic model.⁶⁴

to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁶³ Section 4.7.1 of NFRC 100 requires that the accepted difference between the tested U-factor and the simulated U-factor be (a) 0.03 Btu/(h·ft²·°F) for simulated U-factors that are 0.3 Btu/(h·ft²·°F) or less, or (b) 10 percent of the simulated U-factor for simulated U-factors greater than 0.3 Btu/(h·ft²·°F). This agreement must match for the baseline product in a product line. Per NFRC 100, the baseline product is the individual product selected for validation; it is not synonymous with “basic model” as defined in 10 CFR 431.302.

⁶⁴ DOE estimated initial costs to validate an AEDM assuming 24 hours of general time to develop and validate an AEDM based on existing simulation tools. DOE estimated the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing of two basic models per proposed validation class. DOE estimated the additional per basic model cost to determine efficiency using an

DOE expects that the additional detail provided for determining the area used to convert U-factor into conduction load, A_s , would either result in a reduced energy consumption or have no impact. To the extent that this change to the test procedure would amend the energy consumption attributable to a door, such changes would either not change the calculated energy consumption or result in a lower energy consumption value as compared to how manufacturers may currently be rating given that the current test procedure does not provide specific details on measurement of A_{dd} or A_{nd} . As such, DOE expects that manufacturers would be able to rely on data generated under the current test procedure. While manufacturers must submit a report annually to certify a basic model’s represented values, basic models do not need to be retested annually. The initial test results used to generate a certified rating for a basic model remain valid as long as the basic model has not been modified from the tested design in a way that makes it less efficient or more consumptive, which would require a change to the certified rating. If a manufacturer has modified a basic model in a way that makes it more efficient or less consumptive, new testing is only required if the manufacturer wishes to make claims of the new, more efficient rating.⁶⁵

For doors without motors, DOE has tentatively concluded that the proposed test procedure would not change energy consumption ratings, and therefore would not require re-rating solely as result of DOE’s adoption of this proposed amendment to the test procedure. Therefore, DOE has determined the proposed amendments either decrease or result in no additional testing costs to manufacturers of walk-in doors.

To the extent that changes to the test procedure would amend the energy consumption attributable to a door motor, such changes would either not change the calculated energy consumption or result in a lower energy consumption value as compared to the currently granted waivers addressing door motors. As such, DOE expects that manufacturers would be able to rely on data generated under the current test procedure and current waivers. While manufacturers must submit a report annually to certify a basic model’s represented values, basic models do not

AEDM assuming 1 hour per basic model at the cost of an engineering calibration technician wage of \$46 per hour.

⁶⁵ See guidance issued by DOE at: www1.eere.energy.gov/buildings/appliance_standards/pdfs/cert_faq_2012-04-17.pdf.

⁶¹ As already noted elsewhere in this document, an AEDM is a computer modeling or mathematical tool that predicts the performance of non-tested basic models. These computer modeling and mathematical tools, when properly developed, can provide a means to predict the energy usage or efficiency characteristics of a basic model of a given covered product or equipment and reduce the burden and cost associated with testing.

⁶² DOE estimates the cost of one test to determine energy consumption of a walk-in door, including one physical U-factor test per NFRC 102–2020 to be \$5,000. Per the sampling requirements specified at 10 CFR 429.53(a)(3)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units

need to be retested annually. The initial test results used to generate a certified rating for a basic model remain valid as long as the basic model has not been modified from the tested design in a way that makes it less efficient or more consumptive, which would require a change to the certified rating. If a manufacturer has modified a basic model in a way that makes it more efficient or less consumptive, new testing is only required if the manufacturer wishes to make claims of the new, more efficient rating.⁶⁶

Issue 35: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for appendix A in this NOPR—specifically, whether the proposed test procedure amendments, if finalized, would either not impact or decrease the testing burden for walk-in door manufacturers when compared to the current DOE test procedure in appendix A.

2. Panels

In this NOPR, DOE proposes to amend the existing test procedure in appendix B for measuring the R-value of insulation of panels by:

1. Incorporating by reference the updated version of the applicable industry test method, ASTM C518–17;
2. Including provisions specific to measurement of test specimen and total insulation thickness; and
3. Providing guidance on determining the parallelism and flatness of the test specimen.

Item 1 incorporates by reference the most up to date version of the industry standards currently referenced in the DOE test procedure. Items 2 and 3 include additional instructions intended to improve consistency and reproducibility of test procedure results. DOE has tentatively determined that these proposed amendments would improve the accuracy and reproducibility of the test results and would not be unduly burdensome for manufacturers to conduct, nor would they be expected to increase the testing burden.

DOE expects that the proposed test procedure in appendix B for measuring the R-value of insulation would not increase testing costs per basic model relative to the current DOE test procedure, which DOE estimates to be \$1,200 for third-party lab testing.⁶⁷

⁶⁶ See guidance issued by DOE at: www1.eere.energy.gov/buildings/appliance_standards/pdfs/cert_faqs_2012-04-17.pdf.

⁶⁷ DOE estimates the cost of one test to determine R-value to be \$600. Per the sampling requirements specified at 10 CFR 429.53(a)(3)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model,

Additionally, DOE has tentatively determined that the proposed test procedure in appendix B would not result in manufacturers having to redesign any of the covered equipment or change how the equipment is manufactured. Further DOE has tentatively determined that, if finalized, the proposed amendments would not impact the utility of the equipment.

Issue 36: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for appendix B in this NOPR—specifically, that the proposed test procedure amendments, if finalized, would not increase testing burden on panel manufacturers when compared to the current DOE test procedure in appendix B.

3. Refrigeration Systems

In this NOPR, DOE proposes certain changes to subpart R, appendix C, that DOE has tentatively determined would improve the accuracy and reproducibility of the test results and would not be unduly burdensome for manufacturers to conduct. DOE has tentatively determined that these proposed changes would not impact testing cost. Additionally, the proposed amended subpart R, appendix C, measuring AWEF per AHRI 1250–2009, does not contain any changes that would require retesting or rerating if it were to be adopted. DOE's tentative assessment of the impacts of the proposed amendments of subpart R, appendix C, to include new test procedures for high-temperature refrigeration systems and CO₂ unit coolers are discussed in more detail below.

DOE also proposes to adopt certain changes in the newly proposed appendix C1 that would amend the existing test procedure for walk-in coolers and freezers by:

1. Expanding the off-cycle refrigeration system power measurements;
2. Adding methods of test for single-packaged dedicated systems; and
3. Including a method for testing ducted systems.

DOE has tentatively determined that these proposed amendments would improve the representativeness, accuracy, and reproducibility of the test results, and would not be unduly burdensome for manufacturers to conduct. DOE has also tentatively determined that these proposed amendments would impact testing costs by equipment type. DOE does not

except where only one unit of the basic model is produced.

anticipate that the remainder of the amendments proposed in this NOPR would impact test costs or test burden.

DOE estimates third-party test costs for testing to the current DOE test procedure to be:

- \$10,000 for outdoor low-temperature and medium-temperature dedicated condensing units tested alone
- \$6,500 for indoor low temperature and medium temperature dedicated condensing units tested alone
- \$6,500 for low-temperature unit coolers tested alone
- \$6,000 for medium-temperature unit coolers tested alone
- \$10,000 for single-packaged dedicated systems
- \$10,000 for high-temperature matched pairs

As discussed previously in section III.G.1 of this document, DOE is proposing to adopt off-cycle test provisions in AHRI 1250–2020 for walk-in cooler and freezer refrigeration systems. The current test procedure requires off-cycle power to be measured at the 95 °F ambient condition. The proposed test procedure requires off-cycle to be measured at 95 °F, 59 °F, and 35 °F ambient conditions for outdoor dedicated condensing units, outdoor matched pair systems, and outdoor dedicated systems. The matched pair and single-packaged dedicated systems include high-temperature refrigeration systems. When the waivers for these high-temperature refrigeration systems were granted, only one off-cycle test was required; therefore, manufacturers with waivers would be required to conduct additional testing as compared to the alternate test procedure currently required. DOE estimates that measuring off-cycle power at these additional ambient conditions may increase per-unit third-party lab test cost by \$1,000 per unit to a total cost of \$11,000 per unit for outdoor dedicated condensing units, outdoor matched pair systems, and outdoor single-packaged dedicated systems.

Manufacturers are not required to perform laboratory testing on all basic models. In accordance with 10 CFR 429.53, WICF refrigeration system manufacturers may elect to use AEDMs. DOE estimates the per-manufacturer cost to develop and validate an AEDM for outdoor dedicated condensing units and outdoor matched pair systems to be \$24,580.⁶⁸ DOE estimates an additional

⁶⁸ Outdoor single-packaged systems are also impacted by the proposed adoption of AHRI 1250–2020 single-packaged test procedure for walk-in cooler and freezer refrigeration systems. The combined potential cost increase for outdoor single-packaged systems is presented in the next paragraph.

cost of approximately \$46 per basic model⁶⁹ for determining energy efficiency of a given basic model using the validated AEDM.

As discussed previously in section III.G.2, DOE is proposing to adopt the single-packaged dedicated system test procedure for walk-ins in AHRI 1250–2020. The proposed procedure requires air enthalpy tests to be used as the primary test method. In the current test procedure, single-packaged dedicated systems use refrigerant enthalpy as the primary test method. DOE does not estimate a difference in physical testing costs between air and refrigerant enthalpy testing of single-packaged units. DOE estimates the per-unit third-party lab test cost to be \$11,000 for outdoor single-packaged units and \$6,500 for indoor single-packaged units. However, should a manufacturer choose to use an AEDM, they may incur additional costs regarding the development and validation of new AEDMs for single-packaged dedicated systems. DOE estimates the per-manufacturer cost to develop and validate an AEDM to be \$24,580 for outdoor single-packaged units and \$15,580 for indoor single-packaged units. DOE estimates an additional cost of approximately \$46 per basic model⁷⁰ for determining energy efficiency using the validated AEDM.

As discussed in sections III.F.6 and III.G.6, DOE is proposing test procedures for CO₂ unit coolers and high-temperature refrigeration systems. DOE tentatively estimates that the average third-party lab per unit test cost would be \$11,000 for a high-temperature matched pair or single-packaged system, \$6,000 for a high-temperature unit cooler tested alone,

\$6,500 for a low temperature CO₂ unit cooler, and \$6,000 for a medium temperature CO₂ unit cooler. As discussed previously, DOE has granted waivers to certain manufacturers for both high-temperature refrigeration systems and CO₂ unit coolers. The test procedures proposed in this NOPR are consistent with the alternate test procedures included in the granted waivers. For those manufacturers who have been granted a test procedure waiver for this equipment, DOE expects that there would be no additional test burden. However, DOE expects that there would be additional testing costs for any manufacturers of these products who have not submitted or been granted a test procedure waiver at the time this proposed test procedure is finalized. Such companies may incur an additional per unit test cost of:

- \$11,000 for a high-temperature matched pair or single-packaged system;
- \$6,000 for a high-temperature unit cooler tested alone;
- \$6,500 for a low temperature CO₂ unit cooler tested alone; and
- \$6,000 for a medium temperature CO₂ unit cooler tested alone.

Issue 37: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for refrigeration systems—specifically, whether DOE’s initial conclusion that the proposed DOE test procedure amendments, if finalized, would increase testing burden.

K. Compliance Date and Waivers

EPCA prescribes that, if DOE amends a test procedure, all representations of energy efficiency and energy use, including those made on marketing materials and product labels, must be made in accordance with that amended

test procedure, beginning 180 days after publication of such a test procedure final rule in the **Federal Register**. (42 U.S.C. 6314(d)(1)) To the extent the modified test procedure proposed in this document is required only for the evaluation and issuance of updated efficiency standards, use of the modified test procedure, if finalized, would not be required until the implementation date of updated standards. 10 CFR 431.4; section 8(e) of appendix A 10 CFR part 430 subpart C.

If DOE were to publish an amended test procedure, EPCA provides an allowance for individual manufacturers to petition DOE for an extension of the 180-day period if the manufacturer may experience undue hardship in meeting the deadline. (42 U.S.C. 6314(d)(2)) To receive such an extension, petitions must be filed with DOE no later than 60 days before the end of the 180-day period and must detail how the manufacturer will experience undue hardship. *Id.*

Upon the compliance date of any provisions of an amended test procedure, any waivers that are currently in effect pertaining to issues addressed by such provisions are terminated. 10 CFR 431.401(h)(3). Recipients of any such waivers would be required to test the products subject to the waiver according to the amended test procedure as of the compliance date of the amended test procedure. The amendments proposed in this document pertain to issues addressed by waivers and interim waivers granted to the manufacturers listed in Table III.15. The proposed amendments also address issues identified in a pending waiver for RSG (Case No. 2022–004).⁷¹

TABLE III.15—MANUFACTURERS GRANTED WAIVERS AND INTERIM WAIVERS

Manufacturer	Subject	Case No.	Relevant test procedure	Proposed test procedure compliance date
Jamison Door Company	PTO for Door Motors	2017–009	Appendix A	180 days after test procedure final rule publication.
HH Technologies	PTO for Door Motors	2018–001	Appendix A	180 days after test procedure final rule publication.
Senneca Holdings	PTO for Door Motors	2020–002	Appendix A	180 days after test procedure final rule publication.
Hercules	PTO for Door Motors	2020–013	Appendix A	180 days after test procedure final rule publication.

⁶⁹ DOE estimated initial costs to validate an AEDM assuming 40 hours of general time to develop an AEDM based on existing simulation tools and 16 hours to validate two basic models within that AEDM at the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing of two units per validation class (as required in 10 CFR 429.70(c)(2)(iv)). DOE estimated the additional per basic model cost to determine efficiency using

an AEDM assuming 1 hour per basic model at the cost of an engineering calibration technician wage of \$46 per hour.

⁷⁰ DOE estimated initial costs to validate an AEDM assuming 40 hours of general time to develop an AEDM based on existing simulation tools and 16 hours to validate two basic models within that AEDM at the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing

of two units per validation class (as required in 10 CFR 429.70(c)(2)(iv)). DOE estimated the additional per basic model cost to determine efficiency using an AEDM assuming 1 hour per basic model at the cost of an engineering calibration technician wage of \$46 per hour.

⁷¹ The RSG waiver docket can be found at www.regulations.gov/docket/EERE-2022-BT-WAV-0010.

TABLE III.15—MANUFACTURERS GRANTED WAIVERS AND INTERIM WAIVERS—Continued

Manufacturer	Subject	Case No.	Relevant test procedure	Proposed test procedure compliance date
HTPG	CO ₂ Unit Coolers	2020–009	Appendix C	180 days after test procedure final rule publication.
Hussmann	CO ₂ Unit Coolers	2020–010	Appendix C	180 days after test procedure final rule publication.
Keeprite	CO ₂ Unit Coolers	2020–014	Appendix C	180 days after test procedure final rule publication.
RefPlus, Inc	CO ₂ Unit Coolers	2021–006	Appendix C	180 days after test procedure final rule publication.
RSG	Multi-Circuit Single-Package Dedicated Systems.	2022–004	Appendix C	180 days after test procedure final rule publication.
Store It Cold	Single-Package Dedicated Systems.	2018–002	Appendix C1 ..	Compliance date of updated standards.
CellarPro	Wine Cellar Refrigeration Systems.	2019–009	Appendix C1 ..	Compliance date of updated standards.
Air Innovations	Wine Cellar Refrigeration Systems.	2019–010	Appendix C1 ..	Compliance date of updated standards.
Vinotheque	Wine Cellar Refrigeration Systems.	2019–011	Appendix C1 ..	Compliance date of updated standards.
Vinotemp	Wine Cellar Refrigeration Systems.	2020–005	Appendix C1 ..	Compliance date of updated standards.
LRC Coil	Wine Cellar Refrigeration Systems.	2020–024	Appendix C1 ..	Compliance date of updated standards.

L. Organizational Changes

DOE is also proposing a number of non-substantive organizational changes. As discussed previously, DOE is proposing to reorganize appendices A and B so that they are easier for stakeholders to follow as a step-by-step test procedure. Additionally, DOE is proposing to remove the specifications at 10 CFR 429.53(a)(2)(i) regarding specific test procedure provisions and instead include these provisions in the uniform test method section at 10 CFR 431.304. The intent of this proposed change is to move provisions of the applicable test procedure to the appropriate place in subpart R, rather than keeping them under the provisions for determining represented values for certification. However, DOE is proposing to keep the additional detail regarding the represented values of various configurations of refrigeration systems (e.g., outdoor and indoor dedicated condensing units, matched refrigeration systems, etc.) at 10 CFR 429.53(a)(2)(i).

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866 and 13563

Executive Order (“E.O.”) 12866, “Regulatory Planning and Review,” as supplemented and reaffirmed by E.O. 13563, “Improving Regulation and Regulatory Review,” 76 FR 3821 (Jan. 21, 2011), requires agencies, to the extent permitted by law, to (1) propose or adopt a regulation only upon a reasoned determination that its benefits

justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public. DOE emphasizes as well that E.O. 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, the Office of Information and Regulatory Affairs (“OIRA”) has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, this proposed regulatory

action is consistent with these principles.

Section 6(a) of E.O. 12866 also requires agencies to submit “significant regulatory actions” to OIRA for review. OIRA has determined that this proposed regulatory action does not constitute a “significant regulatory action” under section 3(f) of E.O. 12866. Accordingly, this action was not submitted to OIRA for review under E.O. 12866.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis (“IRFA”) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, “Proper Consideration of Small Entities in Agency Rulemaking,” 67 FR 53461 (Aug. 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel’s website: www.energy.gov/gc/office-general-counsel.

The following sections detail DOE’s IRFA for this test procedure proposed rulemaking.

1. Description of Why Action Is Being Considered

The Energy Policy and Conservation Act, as amended (“EPCA”),⁷² authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part C⁷³ of EPCA, added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. This covered equipment includes walk-in coolers and walk-in freezers, the subject of this document. (42 U.S.C. 6311(1)(G)) DOE is publishing this NOPR in satisfaction of the 7-year review requirement specified in EPCA. (42 U.S.C. 6314(a)(1))

2. Objective of, and Legal Basis for, Rule

The Energy Policy and Conservation Act, as amended (“EPCA”),⁷⁴ authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part C⁷⁵ of EPCA, added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment, which sets forth a variety of provisions designed to improve energy efficiency. This covered equipment includes walk-in coolers and walk-in freezers, the subject of this document. (42 U.S.C. 6311(1)(G))

Under 42 U.S.C. 6314, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered equipment. EPCA requires that any test procedures prescribed or amended under this section must be reasonably designed to produce test results which reflect energy efficiency, energy use or estimated annual operating cost of a given type of covered equipment during a representative average use cycle and requires that test procedures not be unduly burdensome to conduct. (42 U.S.C. 6314(a)(2))

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered equipment including WICFs, to determine whether amended test procedures would more accurately or fully comply with the requirements for

the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle. (42 U.S.C. 614(a)(1)(A))

3. Description and Estimate of Small Entities Regulated

For manufacturers of WICFs, the Small Business Administration (“SBA”) has set a size threshold, which defines those entities classified as “small businesses” for the purposes of the statute. DOE used the SBA’s small business size standards to determine whether any small entities would be subject to the requirements of the rule. See 13 CFR part 121. The equipment covered by this rule are classified under North American Industry Classification System (“NAICS”) code 333415,⁷⁶ “Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing.” In 13 CFR 121.201, the SBA sets a threshold of 1,250 employees or fewer for an entity to be considered as a small business for this category.

DOE reviewed the test procedures proposed in this NOPR under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. DOE used publicly available information to identify potential small businesses that manufacture WICFs covered in this rulemaking. DOE’s analysis relied on publicly available databases to identify potential small businesses that manufacture equipment covered in this rulemaking. DOE utilized the DOE’s Certification Compliance Database (“CCD”) ⁷⁷ and the California Energy Commission’s Modernized Appliance Efficiency Database System (“MAEDbS”) ⁷⁸ in identifying manufacturers. DOE also used subscription-based business information tools to determine headcount and revenue of the small businesses.

Using these data sources, DOE identified 79 original equipment manufacturers (“OEMs”) of WICFs that could be potentially affected by this rulemaking. DOE screened out companies that do not meet the

definition of a “small business” or are foreign-owned and operated. Of these 79 OEMs, 60 are small, domestic manufacturers. DOE notes that some manufacturers may produce more than one of the principal components of WICFs: Panels, doors, and refrigeration systems. Eighteen of the small, domestic OEMs manufacture refrigeration systems; 38 of the small, domestic OEMs manufacture panels; and 43 of the small, domestic OEMs manufacture doors. To better reflect the impact on manufacturers, DOE evaluated the impacts of test procedure changes to panels, doors, and refrigeration systems separately.

Of these small businesses, not all were impacted by the proposed changes. The following section further details the impact to manufacturers by principal component and proposed test procedure amendment.

Issue 38: DOE invites comment on the number of small, domestic OEMs producing the three principal components of WICFs: Panels, doors, and refrigeration systems.

4. Description and Estimate of Compliance Requirements

The potential regulatory costs of the proposed test procedure are differentiated by WICF component: Panels, doors, and refrigeration systems. The following sub-sections outline these changes and potential burden.

a. Doors

In this NOPR, DOE proposes the following amendments to the test procedures for walk-in cooler and freezer doors:

1. Referencing NFRC 102–2020 for the determination of U-factor;

2. Including AEDM ⁷⁹ provisions for manufacturers to alternately determine the total energy consumption of display and non-display doors;

3. Providing additional detail for determining the area used to convert U-factor into conduction load, A_s , to differentiate it from the area used to determine compliance with the standards, A_{dd} or A_{nd} ; and

4. Specifying a percent time off (“PTO”) value of 97 percent for door motors.

Items 1 and 3, referencing NFRC 102–2020 and additional detail on the area used to convert U-factor into a

⁷² All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020).

⁷³ For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–1.

⁷⁴ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020).

⁷⁵ For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–1.

⁷⁶ The size standards are listed by NAICS code and industry description and are available at: www.sba.gov/document/support-table-size-standards (Last accessed on November 1, 2021).

⁷⁷ Certified equipment in the CCD are listed by product class and can be accessed at www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A* (Last accessed July 15th, 2021).

⁷⁸ MAEDbS can be accessed at www.caecertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx (Last accessed Nov. 1, 2021).

⁷⁹ An AEDM is a computer modeling or mathematical tool that predicts the performance of non-tested basic models. These computer modeling and mathematical tools, when properly developed, can provide a means to predict the energy usage or efficiency characteristics of a basic model of a given covered product or equipment and reduce the burden and cost associated with testing.

conduction load, would improve the consistency, reproducibility, and representativeness of test procedure results. Item 2, including AEDM provisions, would provide manufacturers with the flexibility to use an alternative method that gives the best agreement for their doors. Item 4, specifying a PTO value of 97 percent for door motors, would provide a more representative and consistent means for comparison of walk-in door performance for doors with motors. DOE has tentatively determined that these proposed amendments as a whole would improve the representativeness, accuracy, and reproducibility of the test results, and would not be unduly burdensome for door manufacturers to conduct. DOE has also tentatively determined that these proposed amendments would not increase physical testing costs per basic model relative to the current DOE test procedure in appendix A, which DOE estimates to be \$10,000 for third-party labs to determine energy consumption of a walk-in door, including physical U-factor testing per NFRC 102–2020.⁸⁰ DOE has tentatively determined that manufacturers would not be required redesign any of the covered equipment or change how the equipment is manufactured, solely as result of the proposed amendments.

DOE is also proposing to permit manufacturers to use AEDMs. Using AEDMs when evaluating the energy efficiency of their equipment may enable some manufacturers to reduce costs to rate models. AEDMs can require an upfront investment but lower overall testing costs. The cost impact to manufacturers as result of the reference to NFRC 102–2020 and inclusion of AEDM provisions is dependent on the agreement specified in Section 4.7.1 of NFRC 100⁸¹ between U-factors simulated using the method in NFRC 100 and U-factors tested using NFRC 102. For manufacturers of doors that have been able to achieve the specified

agreement between U-factors simulated using the method in NFRC 100 and U-factors tested using NFRC 102, manufacturers would be able to continue using the simulation method in NFRC 100, provided that the simulation method also meets the basic requirements proposed for an AEDM in 10 CFR 429.53 and 10 CFR 429.70(f).

For manufacturers of doors that have not been able to achieve the specified agreement between U-factors simulated using the method in NFRC 100 and U-factors tested using NFRC 102, DOE estimates that the test burden could decrease. Under the current requirements, manufacturers may be required to physically test every model to meet the basic model definition since these models are highly customizable. If the proposed test procedure is adopted, manufacturers who would otherwise physically test every walk-in door basic model could develop an AEDM for rating. DOE estimates the per-manufacturer cost to develop and validate an AEDM for a single validation class of walk-in doors to be \$11,100. DOE estimates the cost to determine energy consumption of a walk-in door using an AEDM to be \$46 per basic model.

DOE expects that the additional detail provided for determining the area used to convert U-factor into conduction load, A_s , would either result in a reduced energy consumption or have no impact. To the extent that this change to the test procedure would amend the energy consumption attributable to a door, such changes would either not change the calculated energy consumption or result in a lower energy consumption value as compared to how manufacturers may currently be rating. As such, DOE expects that manufacturers would be able to rely on data generated under the current test procedure. While manufacturers must submit a report annually to certify a basic model's represented values, basic models do not need to be retested annually. The initial test results used to generate a certified rating for a basic model remain valid as long as the basic model has not been modified from the tested design in a way that makes it less efficient or more consumptive, which would require a change to the certified rating. If a manufacturer has modified a basic model in a way that makes it more efficient or less consumptive, new testing is only required if the manufacturer wishes to make claims of the new, more efficient rating.⁸²

For doors without motors, DOE has tentatively concluded that the proposed test procedure would not change energy consumption ratings, and therefore would not require re-rating as a result of this proposed test procedure. Therefore, DOE has determined the proposed amendments would either decrease or result in no additional testing costs to small business manufacturers of walk-in doors.

To the extent that changes to the test procedure would amend the energy consumption attributable to a door motor, such changes would either not change the calculated energy consumption or result in a lower energy consumption value as compared to the currently granted waivers addressing door motors. As such, DOE expects that manufacturers would be able to rely on data generated under the current test procedure and current waivers. While manufacturers must submit a report annually to certify a basic model's represented values, basic models would not need to be retested annually. The initial test results used to generate a certified rating for a basic model would remain valid as long as the basic model has not been modified from the tested design in a way that makes it less efficient or more consumptive, which would require a change to the certified rating. If a manufacturer has modified a basic model in a way that makes it more efficient or less consumptive, new testing would be required only if the manufacturer wishes to make claims of the new, more efficient rating.⁸³

Issue 39: DOE requests comment on its cost estimate of impacts on small, domestic OEMs of doors.

b. Panels

DOE proposes to amend the existing test procedure in appendix B for measuring the R-value of insulation of walk-in panels by:

1. Incorporating by reference the updated version of the applicable industry test method, ASTM C518–17;
2. Including provisions specific to the measurement of test specimen and total insulation thickness; and
3. Providing guidance on determining the parallelism and flatness of the test specimen.

Item 1 incorporates by reference the most up to date version of the industry standards currently referenced in the DOE test procedure. Items 2 and 3 includes additional instructions that would improve the consistency and reproducibility of test procedure results.

⁸⁰ DOE estimates the cost of one test to determine energy consumption of a walk-in door, including one physical U-factor test per NFRC 102–2020, to be \$5,000. Per the sampling requirements specified at 10 CFR 429.53(a)(3)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁸¹ Section 4.7.1 of NFRC 100 requires that the accepted difference between the tested U-factor and the simulated U-factor be (a) 0.03 Btu/(h·ft²·°F) for simulated U-factors that are 0.3 Btu/(h·ft²·°F) or less, or 10 percent of the simulated U-factor for simulated U-factors greater than 0.3 Btu/(h·ft²·°F). This agreement must match for the baseline product in a product line. Per NFRC 100, the baseline product is the individual product selected for validation; it is not synonymous with "basic model" as defined in 10 CFR 431.302.

⁸² See guidance issued by DOE at: www1.eere.energy.gov/buildings/appliance_standards/pdfs/cert_fa_2012-04-17.pdf.

⁸³ See guidance issued by DOE at: www1.eere.energy.gov/buildings/appliance_standards/pdfs/cert_fa_2012-04-17.pdf.

DOE has tentatively determined that these proposed amendments would improve the accuracy and reproducibility of the test results and would not be unduly burdensome for manufacturers to conduct, nor would they be expected to increase the testing burden.

DOE expects that the proposed test procedure in appendix B for the measuring R-value of insulation would not increase testing costs per basic model relative to the current DOE test procedure, which DOE estimates to be \$1,200 for third-party lab testing.⁸⁴ Additionally, DOE has tentatively determined that manufacturers would not be required to redesign any of the covered equipment or change how the equipment is manufactured, solely as result of the proposed amendments. Further, DOE has tentatively determined that the proposed amendments would not impact the utility of the equipment.

DOE has tentatively concluded that the proposed test procedure would not change efficiency ratings for walk-in panels, and therefore would not require re-rating as result of DOE's adoption of this proposed amendment to the test procedure. Therefore, DOE has determined the proposed amendments would not add any additional testing costs to small business manufacturers of walk-in doors.

Issue 40: DOE requests comment on its cost estimate of impacts on small, domestic OEMs of panels.

c. Refrigeration Systems

In this NOPR, DOE proposes certain changes to subpart R, appendix C, that DOE has tentatively determined would improve the accuracy and reproducibility of the test results and would not be unduly burdensome for manufacturers to conduct. DOE has tentatively determined that these proposed changes would not impact testing cost. Additionally, the proposed amended subpart R, appendix C, measuring AWEF per AHRI 1250–2009, does not contain any changes that would require retesting or rerating if it were to be adopted.

DOE also proposes to adopt through incorporations by reference certain provisions of AHRI 1250–2020 in

appendix C1 that would amend the existing test procedure for walk-in cooler and freezer refrigeration systems. Additionally, DOE proposes amendments to the current DOE test procedure to accommodate high-temperature refrigeration systems and CO₂ unit coolers. A summary of the proposed changes are as follows:

1. Expanding the off-cycle refrigeration system power measurements;
2. Adding air enthalpy methods for single-packaged dedicated systems;
3. Including new test procedures for high-temperature refrigeration systems; and
4. Including new test procedures for CO₂ unit coolers.

DOE has tentatively determined that these proposed amendments would improve the representativeness, accuracy, and reproducibility of the test results, and would not be unduly burdensome for manufacturers to conduct. DOE has also tentatively determined that these proposed amendments may impact testing costs. The following paragraphs outline the proposed changes and the potential costs to manufacturers. Because DOE's proposal of off-cycle refrigeration power measurements and single-packaged dedicated system air enthalpy test methods requirements impact both high-temperature and CO₂ units, all potential cost impacts to high-temperature and CO₂ units are discussed separately in the third and fourth sections.

(1) Small Business Impacts as a Result of Off-Cycle Refrigeration System Power Requirements

DOE is proposing to adopt the off-cycle testing for walk-ins in AHRI 1250–2020. The current test procedure requires off-cycle power to be measured at the 95 °F ambient condition. The proposed test procedure requires off-cycle to be measured at 95 °F, 59 °F, and 35 °F ambient conditions for outdoor dedicated condensing units, outdoor matched pair systems, and outdoor single-packaged dedicated systems. These proposed amendments would not increase testing costs or require manufacturers to re-rate models, as DOE

energy conservation standards do not currently require off-cycle requirements to be measured at 95 °F, 59 °F, and 35 °F ambient conditions for outdoor dedicated condensing units, outdoor matched pair systems, and outdoor single-packaged systems. However, should DOE adopt energy conservation standards that require these off-cycle requirements, DOE estimates that measuring off-cycle power at these additional ambient conditions may increase per-unit third-party lab test cost by \$1,000 per unit to a total cost of \$11,000 per unit for outdoor dedicated condensing units and outdoor matched pair systems.⁸⁵ The physical testing cost, according to the proposed amendments, would be \$22,000 per basic model for outdoor dedicated condensing units and outdoor matched pair systems.⁸⁶

However, manufacturers are not required to perform laboratory testing on all basic models. In accordance with 10 CFR 429.53, WICF refrigeration system manufacturers may elect to use AEDMs. DOE estimates the per-manufacturer cost to develop and validate an AEDM for outdoor dedicated condensing units and outdoor matched pair systems to be \$24,580 per validation class. DOE estimates an additional cost of approximately \$46 per basic model⁸⁷ for determining energy efficiency using the validated AEDM.

DOE estimates the range of potential costs for the five small OEMs that manufacture outdoor dedicated condensing units and outdoor matched pair systems. When developing cost estimates for the small OEMs, DOE considers the cost to update the existing AEDM simulation tool, the costs to validate the AEDM through physical testing, and the cost to rate basic models using the AEDM. DOE assumes a high-cost scenario where manufacturers would be required to develop AEDMs for six validation classes.

DOE estimates the impacts based on basic model counts and company revenue. Table IV.1 summarizes DOE's estimates for the five identified small businesses. On average, testing costs represent less than 1 percent of annual revenue for a typical small business.

⁸⁴ DOE estimates the cost of one test to determine R-value to be \$600. Per the sampling requirements specified at 10 CFR 429.53(a)(3)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁸⁵ Outdoor single-packaged systems are also impacted by the proposed adoption of AHRI 1250–2020 single-packaged test procedure for walk-in cooler and freezer refrigeration systems. The

combined potential cost increase for outdoor single-packaged systems is presented in the following section.

⁸⁶ The cost to test one unit is \$11,000. Per the sampling requirements specified at 10 CFR 429.53(a)(2)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁸⁷ DOE estimated initial costs to validate an AEDM assuming 40 hours of general time to

develop an AEDM based on existing simulation tools and 16 hours to validate two basic models within that AEDM at the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing of two units per validation class (as required in 10 CFR 429.70(c)(2)(iv)). DOE estimated the additional per basic model cost to determine efficiency using an AEDM assuming 1 hour per basic model at the cost of an engineering calibration technician wage of \$46 per hour.

TABLE IV.1—ESTIMATED SMALL BUSINESS RE-RATING COSTS (2022\$) AS A RESULT OF OFF-CYCLE REFRIGERATION SYSTEM POWER REQUIREMENTS

Manufacturer	Re-rating estimate (\$mm)	Annual revenue estimate (\$mm)	Percent of revenue (%)
Manufacturer A	0.151	12	1.25
Manufacturer B	0.148	19	0.78
Manufacturer C	0.214	77	0.28
Manufacturer D	0.148	86	0.17
Manufacturer E	0.159	147	0.10

(2) Small Business Impacts as a Result of Requiring Single-Packaged Dedicated Systems To Test Using Air Enthalpy Methods

DOE is also proposing to adopt the single-packaged dedicated system test procedure in AHRI 1250–2020 for walk-in cooler and freezer refrigeration systems. The proposed procedure requires air enthalpy tests to be used as the primary test method. In the current test procedure, single-packaged dedicated systems use refrigerant enthalpy as the primary test method. DOE estimates no difference in costs between air and refrigerant enthalpy testing of single-packaged dedicated systems. DOE estimates the per-unit third-party lab test cost to be \$11,000 for outdoor single-packaged dedicated systems and \$6,500 for indoor single-packaged dedicated systems. The physical testing cost, according to the proposed amendments, would be \$22,000 per basic model for outdoor single-packaged dedicated systems and \$13,000 per basic model for indoor package systems.⁸⁸ However, manufacturers of single-packaged dedicated systems may elect to use AEDMs. DOE estimates the per-manufacturer cost to develop and validate an AEDM per validation class to be \$24,580 for outdoor single-packaged dedicated systems and \$15,580 for indoor single-packaged dedicated systems. DOE estimates an additional cost of approximately \$46 per basic model⁸⁹ for determining energy efficiency using the validated AEDM.

⁸⁸ Per the sampling requirements specified at 10 CFR 429.53(a)(2)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁸⁹ DOE estimated initial costs to validate an AEDM assuming 40 hours of general time to develop an AEDM based on existing simulation tools and 16 hours to validate two basic models within that AEDM at the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing of two units per validation class (as required in 10 CFR 429.70(c)(2)(iv)). DOE estimated the additional per basic model cost to determine efficiency using an AEDM assuming 1 hour per basic model at the

DOE estimated the range of potential costs for the two domestic, small OEMs that manufacture single-packaged dedicated systems. When developing cost estimates for the small OEMs, DOE considered the cost to update the existing AEDM simulation tool, the costs to validate the AEDM through physical testing, and the cost to rate basic models using the AEDM.

Both small businesses manufacture indoor and outdoor, low and medium temperature, single-packaged dedicated systems. One small business manufactures 28 basic models of single-packaged dedicated systems with an estimated annual revenue of \$19 million. Therefore, DOE estimates that the associated re-rating costs for this manufacturer to be approximately \$81,650 when making use of AEDMs. The cost for this manufacturer represents less than 1 percent of annual revenue.

The second small business manufactures 38 basic models of single-packaged dedicated systems with an estimated annual revenue of \$147 million. Therefore, DOE estimates that the associated re-rating costs for this manufacturer to be approximately \$82,100 when making use of AEDMs. The cost for this manufacturer represents less than 1 percent of annual revenue.

(3) Small Business Impacts as a Result of New Test Procedures for High-Temperature Refrigeration Systems

DOE is proposing test procedures for high-temperature refrigeration systems. DOE has granted waivers to certain manufacturers for high-temperature refrigeration systems. The test procedures proposed in this NOPR are consistent with the alternate test procedures included in the granted waivers, excluding the changes discussed previously about off-cycle power measurements. For those manufacturers who have been granted a test procedure waiver for this

cost of an engineering calibration technician wage of \$46 per hour.

equipment, DOE expects the only test burden incurred would be that related to off-cycle requirements. However, DOE expects that there would be additional testing costs for any manufacturers of these products who have not submitted or been granted a test procedure waiver at the time this proposed test procedure is finalized.

For manufacturers that have been granted waivers, DOE estimates that measuring off-cycle power at these additional ambient conditions may increase per-unit third-party lab test cost by \$1,000 to a total per-unit cost of \$11,000 for high-temperature outdoor dedicated condensing units, outdoor matched pair systems, and outdoor single-packaged dedicated systems. The physical testing cost, according to the proposed amendments, would be \$22,000 per basic model for outdoor dedicated condensing units and outdoor matched pair systems.⁹⁰

However, manufacturers are not required to perform laboratory testing on all basic models. In accordance with 10 CFR 429.53, WICF refrigeration system manufacturers may elect to use AEDMs. DOE estimates the per-manufacturer cost to develop and validate an AEDM for outdoor dedicated condensing units and outdoor matched pair systems to be \$24,580 per validation class. DOE estimates an additional cost of approximately \$46 per basic model⁹¹ for determining energy efficiency using the validated AEDM.

⁹⁰ Per the sampling requirements specified at 10 CFR 429.53(a)(2)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁹¹ DOE estimated initial costs to validate an AEDM assuming 40 hours of general time to develop an AEDM based on existing simulation tools and 16 hours to validate two basic models within that AEDM at the cost of an engineering calibration technician fully burdened wage of \$46 per hour plus the cost of third-party physical testing of two units per validation class (as required in 10 CFR 429.70(c)(2)(iv)). DOE estimated the additional per basic model cost to determine efficiency using an AEDM assuming 1 hour per basic model at the cost of an engineering calibration technician wage of \$46 per hour.

DOE estimated the potential costs to manufacturers of high-temperature units as a result of off-cycle requirements using an AEDM. Specifically, DOE estimated the range of potential costs for the five identified domestic, small OEMs that manufacture high-temperature units. When developing cost estimates for the small OEMs, DOE

considers the cost to develop the AEDM simulation tool, the costs to validate the AEDM through physical testing, and the cost to rate basic models using the AEDM. DOE assumes a scenario where manufacturers would be required to develop AEDMs for three validation classes.

DOE estimated the impacts based on basic model counts and company revenue. Table IV.2 summarizes DOE's estimates for the five identified small businesses. On average, testing costs represent approximately 1.5 percent of annual revenue for a typical small business.

TABLE IV.2—ESTIMATED SMALL BUSINESS RE-RATING COSTS (2022\$) FOR HIGH-TEMPERATURE REFRIGERATION SYSTEMS

Manufacturer	Re-rating estimate (\$mm)	Annual revenue estimate (\$mm)	Percent of revenue (%)
Manufacturer A	0.075	2.1	3.57
Manufacturer B	0.074	3.6	2.06
Manufacturer C	0.074	8.9	0.84
Manufacturer D	0.076	11	0.70
Manufacturer E	0.075	14	0.53

For manufacturers that have not been granted waivers, manufacturers of high-temperature equipment may incur first-time rating expenses. DOE estimates these manufacturers may incur rating expenses up to \$22,000 per basic model for a high-temperature matched pair, \$22,000 per basic model for a single-packaged dedicated system, and \$12,000 per basic model for a high-temperature unit cooler.⁹²

(4) Small Business Impacts as a Result of New Test Procedures for CO₂ Unit Coolers

Lastly, DOE is proposing test procedures for CO₂ unit coolers. DOE has granted waivers to certain manufacturers for CO₂ unit coolers. In this proposal, DOE is proposing that CO₂ refrigeration systems, as DOE proposed to define in section III.A.2.h of this NOPR, meet the definition of a walk-in, but that the DOE test procedure is applicable only to single-packaged dedicated and to unit cooler variants of CO₂ refrigeration systems. All CO₂ refrigerant waiver petitions DOE has thus far received address unit coolers. 86 FR 32332, 32346.

The test procedures proposed in this NOPR are consistent with the alternate test procedures included in the granted waivers. For those manufacturers who have been granted a test procedure waiver for this equipment, DOE expects no change in test burden. However, DOE expects that there would be additional testing costs for any manufacturers of these products who have not submitted

or been granted a test procedure waiver at the time this proposed test procedure is finalized. This additional cost is partially offset because, without a method of test, manufacturers of these products would not be able to sell them in the U.S. since there would be no way of certifying their energy use as required EPCA.

For manufacturers that have not been granted waivers, manufacturers of CO₂ equipment may incur first-time rating expenses. DOE estimates these manufacturers may incur rating expenses up to \$13,000 per-unit for a low temperature CO₂ unit cooler and \$12,000 per-unit for a medium temperature CO₂ unit cooler.⁹³ However, manufacturers of CO₂ unit coolers may choose to utilize an AEDM. Furthermore, AEDM unit cooler validation classes do not distinguish between CO₂ unit coolers and non-CO₂ unit coolers. Therefore, manufacturers of CO₂ unit coolers may use the same validation classes as non-CO₂ unit coolers.

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5. Duplication, Overlap, and Conflict With Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the rule being considered in this document.

6. Significant Alternatives to the Rule

DOE proposes to reduce burden on manufacturers, including small businesses, by allowing AEDMs in lieu of physically testing all basic models. The use of an AEDM is less costly than physical testing WICF components. For doors, DOE's proposed inclusion of AEDM provisions would allow manufacturers to develop an AEDM for rating their models. Without an AEDM, DOE estimates physical testing would cost door manufacturers \$10,000 per basic model. With the use of an AEDM, DOE estimates the costs of \$11,100 to develop and validate a single validation class plus an additional \$46 per basic model yielding savings to manufacturers that produce more than one basic model of door. For refrigeration systems, DOE estimates \$24,580 at the high-end of the range to develop and validate an AEDM with an additional cost of \$46 per basic model. With a high-end cost of approximately \$22,000 per basic model to physically test refrigeration models, manufacturers of three or more basic models could yield cost savings.

Additional compliance flexibilities may be available through other means. For example, manufacturers subject to DOE's energy efficiency standards may apply to DOE's Office of Hearings and Appeals for exception relief under certain circumstances. Manufacturers should refer to 10 CFR part 1003 for additional details.

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of walk-ins must certify to DOE that their products comply with any applicable energy conservation standards. To certify

⁹² Per the sampling requirements specified at 10 CFR 429.53(a)(2)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

⁹³ Per the sampling requirements specified at 10 CFR 429.53(a)(2)(ii) and 10 CFR 429.11(b), manufacturers are required to test at least two units to determine the rating for a basic model, except where only one unit of the basic model is produced.

compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including walk-ins. *See generally* 10 CFR part 429. The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by the Office of Management and Budget (“OMB”) under the Paperwork Reduction Act (“PRA”). This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

DOE is not proposing to amend the certification or reporting requirements for walk-ins in this NOPR. Instead, DOE may consider proposals to amend the certification requirements and reporting for walk-ins under a separate rulemaking regarding appliance and equipment certification. DOE will address changes to OMB Control Number 1910–1400 at that time, as necessary.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this NOPR, DOE proposes test procedure amendments that it expects would be used to develop and implement future energy conservation standards for walk-in coolers and freezers. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE’s implementing regulations at 10 CFR part 1021. Specifically, DOE has tentatively determined that adopting test procedures for measuring energy efficiency of consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. *See also* 10 CFR 1021.410. DOE will

complete its NEPA review before issuing the final rule.

E. Review Under Executive Order 13132

Executive Order 13132, “Federalism,” 64 FR 43255 (Aug. 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE has examined this proposed rule and has tentatively determined that it would not have a substantial direct effect on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, “Civil Justice Reform,” 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that executive agencies make every reasonable effort to ensure that the regulation (1) clearly specifies the preemptive effect, if any, (2) clearly specifies any effect on existing Federal law or regulation, (3) provides a clear legal standard for affected conduct while promoting simplification and

burden reduction, (4) specifies the retroactive effect, if any, (5) adequately defines key terms, and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met, or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, the proposed rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (“UMRA”) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments, and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of \$100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at energy.gov/gc/office-general-counsel. DOE examined this proposed rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of \$100 million or more in any year, so these requirements do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations

Act, 1999 (Pub. L. 105–277), requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This proposed rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights,” 53 FR 8859 (March 18, 1988), that this proposed regulation would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note), provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB’s guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE’s guidelines were published at 67 FR 62446 (Oct. 7, 2002). Pursuant to OMB Memorandum M–19–15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf. DOE has reviewed this proposed rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,” 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any proposed significant energy action. A “significant energy action” is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For

any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

The proposed regulatory action to amend the test procedure for measuring the energy efficiency of walk-ins is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; “FEAA”) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (“FTC”) concerning the impact of the commercial or industry standards on competition.

The proposed modifications to the test procedure for walk-ins would incorporate testing methods contained in certain sections of the following commercial standards: NFRC 102–2020, ASTM C1199–14, ASTM C518–17, AHRI 1250–2020, ASHRAE 37–2009, AHRI 1250–2020, ANSI/ASHRAE 37–2009, and ANSI/ASHRAE 16–2016. DOE has evaluated these standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the FEAA (*i.e.*, whether they were developed in a manner that fully provides for public participation, comment, and review). DOE will consult with both the Attorney General and the Chairman of the FTC concerning the impact of these test procedures on competition, prior to prescribing a final rule.

M. Description of Materials Incorporated by Reference

In this NOPR, DOE proposes to incorporate by reference the following industry test standards into 10 CFR part 431:

(1) AHRI Standard 1250–2020, “Standard for Performane Rating of Walk-in Coolers and Freezers,” copyright 2020.

AHRI 1250–2020 is an industry-accepted test procedure for measuring the performance of walk-in cooler and walk-in freezer refrigeration systems. AHRI 1250–2020 is available on AHRI’s website at www.ahrinet.org/search-standards.

(2) ANSI/ASHRAE Standard 16–2016, “Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity,” approved October 31, 2016.

ANSI/ASHRAE 16 is an industry-accepted test procedure for measuring cooling and heating capacity of room air conditioners, packaged terminal air conditioners, and packaged terminal heat pumps referenced by AHRI 1250–2020. ANSI/ASHRAE 16 includes test provisions related to the measuring of the capacity of single-packaged dedicated systems for the proposed appendix C1 test procedure. ANSI/ASHRAE 16 is available on ASHRAE’s website at www.ashrae.org.

(3) ANSI/ASHRAE Standard 37–2009, “Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,” approved June 24, 2009.

ANSI/ASHRAE 37 is an industry-accepted test procedure for testing and rating air-conditioning and heat pump equipment referenced by AHRI 1250–2020. ANSI/ASHRAE 37 includes test provisions related to the measuring of the capacity of single-packaged dedicated systems for the proposed appendix C1 test procedure. ANSI/ASHRAE 37 is available on ASHRAE’s website at www.ashrae.org.

(4) ASTM C518–17, “Standard Test Method for Steady state Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,” approved May 1, 2017.

ASTM C518–17 is an industry-accepted test procedure for measuring thermal transmission properties using a heat flow meter apparatus. ASTM C518–17 is available on ASTM’s website at www.astm.org.

(5) ASTM C1199–14, “Standard Test Method for Measuring the Steady state Thermal Transmittance of Fenestration Systems Using Hot Box Methods,” approved February 1, 2014.

ASTM C1199–14 is an industry-accepted test procedure for measuring the steady state thermal transmittance of fenestration systems referenced by NFRC 102–2020. ASTM C1199–14 is available on ASTM’s website at www.astm.org.

(6) NFRC 102–2020 [E0A0], “Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.”

NFRC 102–2020 is an industry-accepted test procedure for measuring the steady state thermal transmittance of fenestration systems. NFRC 102–2020 is available on NFRC’s website at www.nfrc.org/.

The following standards were approved on December 28, 2016, for IBR into the provisions where they appear in this document and no change in use is proposed: ANSI/AHRI Standard 420–2008, AHRI Standard 1250 (I–P)–2009, and ANSI/ASHRAE Standard 23.1–2010.

V. Public Participation

A. Participation in the Webinar

The time and date of the webinar are listed in the **DATES** section at the beginning of this document. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE’s website: www.energy.gov/eere/buildings/public-meetings-and-comment-deadlines. Participants are responsible for ensuring their systems are compatible with the webinar software.

B. Procedure for Submitting Prepared General Statements for Distribution

Any person who has an interest in the topics addressed in this document, or who is representative of a group or class of persons that has an interest in these issues, may request an opportunity to make an oral presentation at the webinar. Such persons may submit to ApplianceStandardsQuestions@ee.doe.gov. Persons who wish to speak should include with their request a computer file in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format that briefly describes the nature of their interest in this proposed rulemaking and the topics they wish to discuss. Such persons should also provide a daytime telephone number where they can be reached.

Persons requesting to speak should briefly describe the nature of their interest in this rulemaking and provide a telephone number for contact. DOE requests persons selected to make an oral presentation to submit an advance

copy of their statements at least two weeks before the webinar. At its discretion, DOE may permit persons who cannot supply an advance copy of their statement to participate, if those persons have made advance alternative arrangements with the Building Technologies Office. As necessary, requests to give an oral presentation should ask for such alternative arrangements.

C. Conduct of the Webinar

DOE will designate a DOE official to preside at the webinar/public meeting and may also use a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA (42 U.S.C. 6306). A court reporter will be present to record the proceedings and prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the webinar/public meeting. There shall not be discussion of proprietary information, costs or prices, market share, or other commercial matters regulated by U.S. anti-trust laws. After the webinar/public meeting and until the end of the comment period, interested parties may submit further comments on the proceedings and any aspect of the proposed rulemaking.

The webinar/public meeting will be conducted in an informal, conference style. DOE will present a general overview of the topics addressed in this proposed rulemaking, allow time for prepared general statements by participants, and encourage all interested parties to share their views on issues affecting this proposed rulemaking. Each participant will be allowed to make a general statement (within time limits determined by DOE), before the discussion of specific topics. DOE will permit, as time permits, other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly. Participants should be prepared to answer questions by DOE and by other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this proposed rulemaking. The official conducting the webinar/public meeting will accept additional comments or questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of the procedures that may be needed

for the proper conduct of the webinar/public meeting.

A transcript of the webinar/public meeting will be included in the docket, which can be viewed as described in the Docket section at the beginning of this proposed rule. In addition, any person may buy a copy of the transcript from the transcribing reporter.

D. Submission of Comments

DOE will accept comments, data, and information regarding this proposed rule no later than the date provided in the **DATES** section at the beginning of this proposed rule.⁹⁴ Interested parties may submit comments using any of the methods described in the **ADDRESSES** section at the beginning of this document.

Submitting comments via www.regulations.gov. The www.regulations.gov web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment.

⁹⁴ DOE has historically provided a 75-day comment period for test procedure NOPRs pursuant to the North American Free Trade Agreement, U.S.–Canada–Mexico (“NAFTA”), Dec. 17, 1992, 32 I.L.M. 289 (1993); the North American Free Trade Agreement Implementation Act, Public Law 103–182, 107 Stat. 2057 (1993) (codified as amended at 10 U.S.C.A. 2576) (1993) (“NAFTA Implementation Act”); and Executive Order 12889, “Implementation of the North American Free Trade Agreement,” 58 FR 69681 (Dec. 30, 1993). However, on July 1, 2020, the Agreement between the United States of America, the United Mexican States, and the United Canadian States (“USMCA”), Nov. 30, 2018, 134 Stat. 11 (*i.e.*, the successor to NAFTA), went into effect, and Congress’s action in replacing NAFTA through the USMCA Implementation Act, 19 U.S.C. 4501 *et seq.* (2020), implies the repeal of E.O. 12889 and its 75-day comment period requirement for technical regulations. Thus, the controlling laws are EPCA and the USMCA Implementation Act. Consistent with EPCA’s public comment period requirements for consumer products, the USMCA only requires a minimum comment period of 60 days. Consequently, DOE now provides a 60-day public comment period for test procedure NOPRs.

Persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (“CBI”). Comments submitted through *www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email. Comments and documents submitted via email also will be posted to *www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. No faxes will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This

reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: One copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

E. Issues on Which DOE Seeks Comment

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

Issue 1: DOE requests comment on its proposed changes to the definition for walk-in cooler and walk-in freezer.

Issue 2: DOE requests feedback on the proposed changes to the definition of “door” and the newly proposed definition for “door leaf.” DOE also seeks comment on the newly proposed definitions for certain door opening characteristics: “hinged vertical door,” “roll-up door,” and “sliding door.”

Issue 3: DOE requests comment on the proposed definition of “ducted fan coil unit” and on the proposed modification to the “single-packaged dedicated system” definition.

Issue 4: DOE requests comment on the proposed definition for multi-circuit single-packaged dedicated refrigeration systems.

Issue 5: DOE requests comment on the proposed definition for attached split system.

Issue 6: DOE requests comment on the proposed definition for detachable single-packaged dedicated system.

Issue 7: DOE requests comment on the proposed definition of CO₂ unit coolers. DOE also requests comment on whether any distinguishing features of CO₂ unit coolers exist that could reliably be used as an alternative approach that can differentiate them from those unit coolers intended for use with conventional refrigerants.

Issue 8: DOE requests comment on the proposed definition for hot gas defrost.

Specifically, DOE requests comment on if this proposed definition is sufficient to identify which equipment is sold with hot gas defrost capability installed and which is not.

Issue 9: DOE requests feedback on the proposed provisions relating to test specimen and total insulation thickness and test specimen preparation prior to conducting the ASTM C518–17 test.

Issue 10: DOE requests feedback on the proposed provisions relating to determining parallelism and flatness of the test specimen.

Issue 11: DOE seeks comment on other comparable data or studies of aging of foam panels that are representative of the foam insulation, blowing agents, and panel construction currently used in the manufacture of walk-in panels. DOE also requests comment on whether manufacturers have been certifying R-value at time of manufacture or after a period of aging.

Issue 12: DOE requests comment on the proposed pretest coil inspection requirement. DOE requests comment on whether the proposed approach is inconsistent in any way with the way units under test are used to assist in chamber conditioning by testing facilities, and if so, in what way are the proposals inconsistent, and how could they be changed to align with this practice.

Issue 13: DOE requests comment on its proposal to require use of thermometer wells or sheathed sensors immersed in the refrigerant when measuring temperature at the liquid outlet of the condensing unit and to forego the requirement for this measurement technique for the suction line when testing a dedicated condensing unit alone.

Issue 14: DOE requests comment on its proposal to allow the use of two temperature measuring instruments, placed on the outside of refrigerant tubing that is less than or equal to 1/2-inch, for the measurement of refrigerant temperature where the current test procedure requirement is to use thermometer wells or a sheathed sensor immersed in the refrigerant.

Issue 15: DOE requests comment on its proposals discussed in this section regarding set up of walk-in refrigeration systems for testing to achieve manufacturer-specified conditions for superheat, subcooling, high-side temperature, pressure or saturation temperature, low-side temperature, pressure or saturation temperature, and refrigerant charge weight. Additionally, DOE requests comment on the proposed hierarchy presented in Table III.6, if a laboratory has confirmed that the unit is properly charged.

Issue 16: DOE requests comments on its proposal to clarify the location where the 3 °F subcooling requirement would apply and to require active cooling of the liquid line in order to achieve the required 3 °F subcooling at a refrigerant mass flow meter. DOE also seeks comment on its proposal to require, for matched pairs, adjustment of the measured unit cooler inlet temperature by the difference in temperatures measured upstream and downstream of the active cooling in order to calculate the inlet enthalpy in the capacity calculation.

Issue 17: DOE requests comment on the appropriateness of traditional refrigerant compressor EER values for use in CO₂ unit cooler AWEF calculations.

Issue 18: DOE requests comment on its proposals to adopt test procedure provisions for high-temperature unit coolers in appendices C and C1 of 10 CFR part 431, subpart R.

Issue 19: DOE requests comments on its proposals to align the test procedures for appendix C1 with AHRI 1250–2020, except for the use of off-cycle power measurements in the AWEF calculations for dedicated condensing units, matched pairs, or single-packaged dedicated systems intended for outdoor installation. DOE requests comments on its proposals for use in the AWEF calculations of the three sets of unit cooler and condensing unit off-cycle measurements made for outdoor refrigeration systems.

Issue 20: DOE requests comment on the proposed single-packaged refrigerant enthalpy test procedure for evaluating the performance of single-packaged dedicated systems.

Issue 21: DOE requests comment on testing detachable single-packaged dedicated systems using the test procedure for single-packaged dedicated systems.

Issue 22: DOE requests comment on its proposal that attached split systems be tested using refrigerant enthalpy methods.

Issue 23: DOE requests comment on provisions for setting ESP when testing ducted units.

Issue 24: DOE requests comments on its proposals for testing multiple-, variable-, and two-capacity dedicated condensing units tested alone. DOE specifically requests comments on (a) the expectation that a unit cooler with which such a condensing unit is paired in the field would have two-speed (or variable-speed) fans or be fitted with such fans during installation, (b) the proposed compressor operating levels to use for testing, (c) the proposed compressor operating level at which the

unit cooler fan would be assumed to switch to half-speed, (d) the proposed targets for unit cooler exit and condensing unit inlet refrigerant temperatures and dew point target temperatures, and (e) the unit cooler half-fan-speed input wattage.

Issue 25: DOE requests comment on whether DOE should set the target test conditions using correlations for unit cooler and suction line response to part-load operation rather than the proposed tabular approach.

Issue 26: DOE requests comment on its proposal to include in its test procedures instructions for testing and determining representations for indoor matched pair and single-packaged dedicated systems.

Issue 27: DOE requests comment on its proposal to modify the approach for calculating intermediate-capacity EER for variable-speed refrigeration systems.

Issue 28: DOE requests comments on its proposals to address part-load testing for refrigeration systems with digital compressors.

Issue 29: DOE requests comment on its proposal to clarify that the second mass flow measurement for the DX Dual Instrumentation method may be in the suction line upstream of the inlet to the condensing unit, as shown in Figure C1 of AHRI 1250–2009.

Issue 30: DOE requests comment on its proposal to adopt the calculations for evaporator fan power in AHRI 1250–2020.

Issue 31: DOE requests comment on its proposal for rounding AWEF to the nearest 0.05 Btu/(W·h) and rounding capacity values to the nearest multiple as presented in Table III.14.

Issue 32: DOE seeks comment on its proposal to allow for the use of AEDMs to determine the energy consumption rating of walk-in doors. DOE requests specific feedback on the proposed 5 percent model tolerance for validating an AEDM, the proposed validation classes and number of basic models required to be tested per validation class, and the proposed 5 percent tolerance on the result from a DOE AEDM verification test.

Issue 33: DOE seeks comment on its proposal to modify and extend its AEDM validation classes for refrigeration systems, consistent with the test procedure revisions discussed in this document.

Issue 34: DOE requests comment on its proposal to apply the low-volume sampling procedures in appendix B of subpart C of 10 CFR part 429 to walk-in doors and panels.

Issue 35: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for

appendix A in this NOPR—specifically, whether the proposed test procedure amendments, if finalized, would either not impact or decrease the testing burden for walk-in door manufacturers when compared to the current DOE test procedure in appendix A.

Issue 36: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for appendix B in this NOPR—specifically, that the proposed test procedure amendments, if finalized, would not increase testing burden on panel manufacturers when compared to the current DOE test procedure in appendix B.

Issue 37: DOE requests comment on its tentative understanding of the impact of the test procedure proposals for refrigeration systems—specifically, whether DOE's initial conclusion that the proposed DOE test procedure amendments, if finalized, would increase testing burden.

Issue 38: DOE invites comment on the number of small, domestic OEMs producing the three principal components of WICFs: Panels, doors, and refrigeration systems.

Issue 39: DOE requests comment on its cost estimate of impacts on small, domestic OEMs of doors.

Issue 40: DOE requests comment on its cost estimate of impacts on small, domestic OEMs of panels.

Issue 41: DOE requests comment on its cost estimate of impacts on small, domestic OEMs of refrigeration systems.

VI. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this notice of proposed rulemaking and announcement of public webinar.

List of Subjects

10 CFR Part 429

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Reporting and recordkeeping requirements.

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation test procedures, Incorporation by reference, and Reporting and recordkeeping requirements.

Signing Authority

This document of the Department of Energy was signed on March 18, 2022, by Kelly J. Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy,

pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on March 23, 2022.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

For the reasons stated in the preamble, DOE is proposing to amend parts 429 and 431 of chapter II of title 10, Code of Federal Regulations as set forth below:

PART 429—CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 2. Amend § 429.53 by:

■ a. Revising paragraphs (a)(2)(i) and (a)(3); and

■ b. Adding paragraph (a)(4).

The revisions and addition read as follows:

§ 429.53 Walk-in coolers and walk-in freezers.

(a) * * *

(2) * * *

(i) *Applicable test procedure.* If the AWEF is determined by testing, test according to the applicable provisions of § 431.304(b) of this chapter with the equipment specific provisions in paragraphs (a)(2)(i)(A) through (D) of this section.

(A) *Dedicated condensing units.* Outdoor dedicated condensing refrigeration systems that are also designated for use in indoor applications must be tested and rated as both an outdoor dedicated condensing refrigeration system and an indoor dedicated refrigeration system.

(B) *Matched refrigeration systems.* A matched refrigeration system is not required to be rated if the constituent unit cooler(s) and dedicated condensing unit have been tested as specified in § 431.304(b)(4) of this chapter. However,

if a manufacturer wishes to represent the efficiency of the matched refrigeration system as distinct from the efficiency of either constituent component, or if the manufacturer cannot rate one or both of the constituent components using the specified method, the manufacturer must test and rate the matched refrigeration system as specified in § 431.304(b)(4) of this chapter.

(C) *Detachable single-packaged dedicated systems.* Detachable single-packaged dedicated systems must be tested and rated as a single-packaged dedicated systems using the test procedure in § 431.304(b)(4) of this chapter.

(D) *Attached split systems.* Attached split systems must be tested and rated as dedicated condensing units and unit coolers using the test procedure in § 431.304(b)(4) of this chapter.

* * * * *

(3) For each basic model of walk-in cooler and walk-in freezer display and non-display door, the daily energy consumption must be determined by testing, in accordance with § 431.304 of this chapter and the provisions of this section, or by application of an alternative efficiency determination method (AEDM) that meets the requirements of § 429.70 and the provisions of this section.

(i) *Applicable test procedure.* Prior to [180 days after publication of final rule], use the test procedure for walk-ins as it appeared in 10 CFR part 431, subpart R, appendix A, revised as of January 1, 2021, to determine daily energy consumption. Beginning [180 days after publication of final rule], use the test procedure in part 431, subpart R, appendix A, of this chapter to determine daily energy consumption.

(ii) *Units to be tested.* For each basic model, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of daily energy consumption of a basic model or other measure of energy use for which consumers would favor lower values shall be greater than or equal to the higher of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

And \bar{x} is the sample mean, n is the number of samples, and x_i is the i^{th} sample; or,

(B) The upper 95 percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{0.95} \frac{s}{\sqrt{n}}$$

And \bar{x} is the sample mean, s is the sample standard deviation; n is the number of samples, and $t_{0.95}$ is the statistic for a 95% one-tailed confidence interval with $n-1$ degrees of freedom (from appendix A to this subpart).

(4) For each basic model of walk-in cooler and walk-in freezer panel and non-display door, the R-value must be determined by testing, in accordance with § 431.304 of this chapter and the provisions of this section.

(i) *Applicable test procedure.* Prior to [date 180 days after publication of final rule], use the test procedure for walk-ins as it appeared in 10 CFR part 431, subpart R, appendix B, revised as of January 1, 2021, to determine R-value. Beginning [date 180 days after publication of final rule], use the test procedure in part 431, subpart R, appendix B, of this chapter to determine R-value.

(ii) *Units to be tested.* For each basic model, a sample of sufficient size shall be randomly selected and tested to ensure that any represented value of R-value or other measure of efficiency of a basic model for which consumers would favor higher values shall be less than or equal to the lower of:

(A) The mean of the sample, where:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

And \bar{x} is the sample mean, n is the number of samples, and x_i is the i^{th} sample; or,

(B) The lower 95 percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{0.95} \frac{s}{\sqrt{n}}$$

And \bar{x} is the sample mean, s is the sample standard deviation; n is the number of samples, and $t_{0.95}$ is the statistic for a 95% one-tailed confidence interval with $n-1$ degree of freedom (from appendix A to this subpart).

* * * * *

■ 3. Amend § 429.70 by:

■ a. Revising paragraphs (f) heading and (f)(2)(ii)(A) and (B);

■ b. Adding paragraph (f)(2)(ii)(C);

■ c. Removing the word “and” at the end of paragraphs (f)(2)(iii)(A) and (C);

■ d. Removing the period at the end of paragraph (f)(2)(iii)(D) and adding “; and” in its place;

■ e. Adding paragraph (f)(2)(iii)(E); and

■ f. Revising paragraphs (f)(2)(iv) and (f)(5)(vi).

The revisions and additions read as follows:

§ 429.70 Alternative methods for determining energy efficiency and energy use.

* * * * *

(f) *Alternative efficiency determination method (AEDM) for walk-in refrigeration systems and doors—*

* * *

(2) * * *

(ii) * * *

(A) For refrigeration systems, which are subject to an energy efficiency metric, the predicted efficiency for each model calculated by applying the AEDM

may not be more than five percent greater than the efficiency determined from the corresponding test of the model.

(B) For doors, which are subject to an energy consumption metric the predicted daily energy consumption for each model calculated by applying the AEDM may not be more than five percent less than the daily energy consumption determined from the corresponding test of the model.

(C) The predicted energy efficiency or energy consumption for each model calculated by applying the AEDM must meet or exceed the applicable Federal energy conservation standard.

(iii) * * *

(E) For rating doors, an AEDM may not simulate or model components of the door that are not required to be tested by the DOE test procedure. That is, if the test results used to validate the AEDM are for the U-factor test of the door, the AEDM must estimate the daily energy consumption, specifically the conduction thermal load, and the direct and indirect electrical energy consumption, using the nominal values and calculation procedure specified in the DOE test procedure.

(iv) *Walk-in coolers and freezers (WICF) validation classes—(A) Doors.*

TABLE 1 TO PARAGRAPH (f)(2)(iv)(A)

Validation class	Minimum number of distinct models that must be tested
Display Doors, Medium Temperature	2 Basic Models.
Display Doors, Low Temperature	2 Basic Models.
Non-display Doors, Medium Temperature	2 Basic Models.
Non-display Doors, Low Temperature	2 Basic Models.

(B) *Refrigeration systems.* (1) For representations made prior to the compliance date of revised energy

conservation standards for walk-in cooler and walk-in freezer refrigeration

systems, use the following validation classes.

TABLE 2 TO PARAGRAPH (f)(2)(iv)(B)(1)

Validation class	Minimum number of distinct models that must be tested
Dedicated Condensing, Medium Temperature, Matched Pair Indoor System	2 Basic Models.
Dedicated Condensing, Medium Temperature, Matched Pair Outdoor System. ¹	2 Basic Models.
Dedicated Condensing, Low Temperature, Matched Pair Indoor System	2 Basic Models.
Dedicated Condensing, Low Temperature, Matched Pair Outdoor System. ¹	2 Basic Models.
Unit Cooler, High-temperature	2 Basic Models.
Unit Cooler, Medium Temperature	2 Basic Models.
Unit Cooler, Low Temperature	2 Basic Models.
Medium Temperature, Indoor Condensing Unit	2 Basic Models.
Medium Temperature, Outdoor Condensing Unit. ¹	2 Basic Models.
Low Temperature, Indoor Condensing Unit	2 Basic Models.
Low Temperature, Outdoor Condensing Unit. ¹	2 Basic Models.

¹ AEDMs validated for an outdoor class by testing only outdoor models of that class may be used to determine representative values for the corresponding indoor class, and additional validation testing is not required. AEDMs validated only for a given indoor class by testing indoor models or a mix of indoor and outdoor models may not be used to determine representative values for the corresponding outdoor class.

(2) For representations made on or after the compliance date of revised

energy conservation standards for walk-in cooler and walk-in freezer

refrigeration systems, use the following validation classes.

TABLE 3 TO PARAGRAPH (f)(2)(iv)(B)(2)

Validation class	Minimum number of distinct models that must be tested
Dedicated Condensing Unit, Medium Temperature, Indoor System	2 Basic Models.
Dedicated Condensing Unit, Medium Temperature, Outdoor System. ¹	2 Basic Models.
Dedicated Condensing Unit, Low Temperature, Indoor System	2 Basic Models.
Dedicated Condensing Unit, Low Temperature, Outdoor System. ¹	2 Basic Models.
Single-packaged Dedicated Condensing, High-temperature, Indoor System	2 Basic Models.

TABLE 3 TO PARAGRAPH (f)(2)(iv)(B)(2)—Continued

Validation class	Minimum number of distinct models that must be tested
Single-packaged Dedicated Condensing, High-temperature, Outdoor System. ¹	2 Basic Models.
Single-packaged Dedicated Condensing, Medium Temperature, Indoor System	2 Basic Models.
Single-packaged Dedicated Condensing, Medium Temperature, Outdoor System. ¹	2 Basic Models.
Single-packaged Dedicated Condensing, Low Temperature, Indoor System	2 Basic Models.
Single-packaged Dedicated Condensing, Low Temperature, Indoor System. ¹	2 Basic Models.
Matched Pair, High-temperature, Indoor Condensing Unit	2 Basic Models.
Matched Pair, High-temperature, Outdoor Condensing Unit. ¹	2 Basic Models.
Matched Pair, Medium Temperature, Indoor Condensing Unit	2 Basic Models.
Matched Pair, Medium Temperature, Outdoor Condensing Unit. ¹	2 Basic Models.
Matched Pair, Low Temperature, Indoor Condensing Unit	2 Basic Models.
Matched Pair, Low Temperature, Outdoor Condensing Unit. ¹	2 Basic Models.
Unit Cooler, High-temperature	2 Basic Models.
Unit Cooler, Medium Temperature	2 Basic Models.
Unit Cooler, Low Temperature	2 Basic Models.

¹ AEDMs validated for an outdoor class by testing only outdoor models of that class may be used to determine representative values for the corresponding indoor class, and additional validation testing is not required. AEDMs validated only for a given indoor class by testing indoor models or a mix of indoor and outdoor models may not be used to determine representative values for the corresponding outdoor class.

* * * * *

(5) * * *

(vi) *Tolerances*. For efficiency metrics, the result from a DOE

verification test must be greater than or equal to the certified rating $\times (1 - \text{the applicable tolerance})$. For energy consumption metrics, the result from a

DOE verification test must be less than or equal to the certified rating $\times (1 + \text{the applicable tolerance})$.

TABLE 4 TO PARAGRAPH (f)(5)(vi)

Equipment	Metric	Applicable tolerance
Refrigeration systems (including components)	AWEF	5%
Doors	Daily Energy Consumption	5%

* * * * *

■ 4. Amend § 429.110 by revising paragraph (e)(2) to read as follows:

§ 429.110 Enforcement testing.

* * * * *

(e) * * *

(2) For automatic commercial ice makers; commercial refrigerators, freezers, and refrigerator-freezers; refrigerated bottled or canned vending machines; commercial air conditioners and heat pumps; commercial packaged boilers; commercial warm air furnaces; commercial water heating equipment; and walk-in cooler and walk-in freezer doors, panels, and refrigeration systems, DOE will use an initial sample size of not more than four units and follow the sampling plans in appendix B of this subpart (Sampling Plan for Enforcement Testing of Covered Equipment and Certain Low-Volume Covered Products).

* * * * *

■ 5. Amend § 429.134 by:

■ a. Adding paragraph (q) introductory text; and

■ b. Revising paragraphs (q)(2) and (4).

The addition and revisions read as follows:

§ 429.134 Product-specific enforcement provisions.

* * * * *

(q) * * * Prior to [date 180 days after final rule publication], the provisions in 10 CFR 429.134, revised as of January 1, 2021, are applicable. On and after [date 180 days after final rule publication], the provisions in paragraphs (q)(1) through (4) of this section apply.

* * * * *

(2) *Verification of refrigeration system net capacity*. The net capacity of the refrigeration system basic model will be measured pursuant to the test requirements of part 431, subpart R, appendix C, of this chapter for each unit tested on and after [date 180 days after final rule publication] but before the compliance date of revised energy conservation standards for walk-in cooler and walk-in freezer refrigeration systems. The net capacity of the refrigeration system basic model will be measured pursuant to the test requirements of part 431, subpart R, appendix C1, of this chapter for each unit tested on and after the compliance date of revised energy conservation standards for walk-in cooler and walk-in freezer refrigeration systems. The

results of the measurement(s) will be averaged and compared to the value of net capacity certified by the manufacturer. The certified net capacity will be considered valid only if the average measured net capacity is within plus or minus five percent of the certified net capacity.

* * * * *

(4) *Verification of door electricity-consuming device power*. For each basic model of walk-in cooler and walk-in freezer door, DOE will calculate the door's energy consumption using the input power listed on the nameplate of each electricity-consuming device shipped with the door. If an electricity-consuming device shipped with a walk-in door does not have a nameplate or the nameplate does not list the device's input power, then DOE will use the device's rated input power included in the door's certification report. If the door is not certified or if the certification does not include a rated input power for an electricity-consuming device shipped with a walk-in door, DOE will use the measured input power. DOE also may validate the power listed on the nameplate or the rated input power by measuring it when

energized using a power supply that provides power within the allowable voltage range listed on the component nameplate or the door nameplate, whichever is available. If the measured input power is more than 10 percent higher than the input power listed on the nameplate or the rated input power, as appropriate, then the measured input power shall be used in the door's energy consumption calculation.

(i) For electricity-consuming devices with controls, the maximum input wattage observed while energizing the device and activating the control shall be considered the measured input power. For anti-sweat heaters that are controlled based on humidity levels, the control may be activated by increasing relative humidity in the region of the controls without damaging the sensor. For lighting fixtures that are controlled with motion sensors, the control may be activated by simulating motion in the vicinity of the sensor. Other kinds of controls may be activated based on the functions of their sensor.

(ii) [Reserved]

* * * * *

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 6. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 7. Amend § 431.302 by:

■ a. Adding, in alphabetical order, definitions for “Attached split system,” “CO₂ unit cooler,” and “Detachable single-packaged dedicated system”;

■ b. Revising the definition for “Door”;

■ c. Adding, in alphabetical order, definitions for “Door leaf,” “Door surface area,” “Ducted fan coil unit,” “High-temperature refrigeration system,” “Hinged vertical door,” “Hot gas defrost,” “Multi-circuit single-packaged dedicated system,” “Non-display door,” and “Roll-up door”;

■ d. Revising the definition of “Single-packaged dedicated system”;

■ e. Adding, in alphabetical order, the definition for “Sliding door”; and

■ f. Revising the definition of “Walk-in cooler and walk-in freezer”;

The additions and revisions read as follows:

§ 431.302 Definitions concerning walk-in coolers and walk-in freezers.

* * * * *

Attached split system means a matched pair refrigeration system which is designed to be installed with the evaporator entirely inside the walk-in

enclosure and the condenser entirely outside the walk-in enclosure, and the evaporator and condenser are permanently connected with structural members extending through the walk-in wall.

* * * * *

CO₂ unit cooler means a unit cooler that includes a nameplate listing only CO₂ as an approved refrigerant.

* * * * *

Detachable single-packaged dedicated system means a system consisting of a dedicated condensing unit and an insulated evaporator section in which the evaporator section is designed to be installed external to the walk-in enclosure and circulating air through the enclosure wall, and the condensing unit is designed to be installed either attached to the evaporator section or mounted remotely with a set of refrigerant lines connecting the two components.

* * * * *

Door means an assembly installed in an opening of an interior or exterior wall that is used to allow access or close off the opening and that is movable in a sliding, pivoting, hinged, or revolving manner of movement. For walk-in coolers and walk-in freezers, a door includes the frame (including mullions), the door leaf or multiple leaves (including glass) within the frame, and any other elements that form the assembly or part of its connection to the wall.

Door leaf means the pivoting, rolling, sliding, or swinging portion of a door.

Door surface area means the product of the height and width of a walk-in door measured external to the walk-in. The height and width dimensions shall be perpendicular to each other and parallel to the wall or panel of the walk-in to which the door is affixed. The height and width measurements extend to the edge of the frame and frame flange (as applicable) to which the door is affixed. The surface area of a display door is represented as A_{dd} and the surface area of a non-display door is represented as A_{nd} .

Ducted fan coil unit means an assembly, including means for forced air circulation capable of moving air against both internal and non-zero external flow resistance, and elements by which heat is transferred from air to refrigerant to cool the air, with provision for ducted installation.

* * * * *

High-temperature refrigeration system means a refrigeration system which is not designed to operate below 45 °F.

Hinged vertical door means a door with a leaf (or leaves) with a hinge (or

hinges) connecting one vertical edge of the leaf (or leaves) to a frame or mullion of the door. This includes doors that swing open in one direction (*i.e.*, into or out of the walk-in) and free-swinging doors that open both into and out of the walk-in.

Hot gas defrost means a factory-installed system where refrigerant is used to transfer heat from ambient outside air, to the compressor, and/or a thermal storage component that stores heat when the compressor is running and uses this stored heat to defrost the evaporator coils.

* * * * *

Multi-circuit single-packaged dedicated system means a single-packaged dedicated system (as defined in this section) that contains two or more refrigeration circuits that refrigerate a single stream of circulated air.

Non-display door means a door that is not a display door.

* * * * *

Roll-up door means a door that bi-directionally rolls open and closed in a vertical and horizontal manner and includes vertical jamb tracks.

Single-packaged dedicated system means a refrigeration system (as defined in this section) that is a single-packaged assembly that includes one or more compressors, a condenser, a means for forced circulation of refrigerated air, and elements by which heat is transferred from air to refrigerant.

Sliding door means a door having one or more manually-operated or motorized leaves within a common frame that slide horizontally or vertically.

* * * * *

Walk-in cooler and walk-in freezer means an enclosed storage space including, but not limited to, panels, doors, and refrigeration system, refrigerated to temperatures, respectively, above, and at or below 32 degrees Fahrenheit that can be walked into, and has a total chilled storage area of less than 3,000 square feet; however, the terms do not include products designed and marketed exclusively for medical, scientific, or research purposes.

* * * * *

■ 8. Amend § 431.303 by:

■ a. Revising paragraph (a);

■ b. Adding paragraph (b)(3);

■ c. Revising paragraphs (c), (d), and (e)(1).

The revisions and additions read as follows:

§ 431.303 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this subpart with the

approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, DOE must publish a document in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at DOE, and at the National Archives and Records Administration (“NARA”). Contact DOE at the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L’Enfant Plaza SW, Washington, DC 20024, (202) 586–9127, Buildings@ee.doe.gov, www.energy.gov/eere/buildings/building-technologies-office. For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html. The material may be obtained from the sources in the following paragraphs of this section.

(b) * * *

(3) AHRI Standard 1250–2020 (“AHRI 1250–2020”), “Standard for Performance Rating of Walk-in Coolers and Freezers,” copyright 2020. IBR approved for appendix C1 to subpart R.

(c) ASHRAE. American Society of Heating, Refrigerating and Air-Conditioning Engineers, 180 Technology Parkway, Peachtree Corners, GA 30092; (404) 636–8400; www.ashrae.org.

(1) ANSI/ASHRAE Standard 16–2016, (“ANSI/ASHRAE 16”), “Method of Testing for Rating Room Air Conditioners, Packaged Terminal Air Conditioners, and Packaged Terminal Heat Pumps for Cooling and Heating Capacity,” approved October 31, 2016, IBR approved for appendix C1 to subpart R.

(2) ANSI/ASHRAE Standard 23.1–2010, (“ASHRAE 23.1–2010”), “Methods of Testing for Rating the Performance of Positive Displacement Refrigerant Compressors and Condensing Units that Operate at Subcritical Temperatures of the Refrigerant,” ANSI approved January 28, 2010, IBR approved for appendix C to subpart R of part 431.

(3) ANSI/ASHRAE Standard 37–2009, (“ANSI/ASHRAE 37”), “Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,” ASHRAE approved June 24, 2009, IBR approved for appendices C and C1 to subpart R.

(d) ASTM. ASTM, International, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; (610) 832–9500; www.astm.org.

(1) ASTM C518–17, (“ASTM C518–17”), “Standard Test Method for Steady-

State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,” approved May 1, 2017, IBR approved for appendix B to subpart R.

(2) ASTM C1199–14, (“ASTM C1199–14”), “Standard Test Method for Measuring the Steady-State Thermal Transmittance of Fenestration Systems Using Hot Box Methods,” approved February 1, 2014, IBR approved for appendix A to subpart R.

(e) * * *

(1) NFRC 102–2020 [E0A0], (“NFRC 102–2020”), “Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems,” IBR approved for appendix A to subpart R.

* * * * *

■ 9. Amend § 431.304 by revising paragraph (b) to read as follows:

§ 431.304 Uniform test method for the measurement of energy consumption of walk-in coolers and walk-in freezers.

* * * * *

(b) *Testing and Calculations.*

Determine the energy efficiency and/or energy consumption of the specified walk-in cooler and walk-in freezer components by conducting the appropriate test procedure as follows:

(1) *Display panels.* Determine the energy use of walk-in cooler and walk-in freezer display panels by conducting the test procedure set forth in appendix A to this subpart.

(2) *Display doors and non-display doors.* Determine the energy use of walk-in cooler and walk-in freezer display doors and non-display doors by conducting the test procedure set forth in appendix A to this subpart.

(3) *Non-display panels and non-display doors.* Determine the R-value of insulation of walk-in cooler and walk-in freezer non-display panels and non-display doors by conducting the test procedure set forth in appendix B to this subpart.

(4) *Refrigeration systems.* Determine the Annual Walk-in Energy Factor (AWEF) and net capacity of walk-in cooler and walk-in freezer refrigeration systems by conducting the test procedures set forth in appendix C or C1 to this subpart, as applicable. Refer to the notes at the beginning of those appendices to determine the applicable appendix to use for testing.

(i) For unit coolers: Follow the general testing provisions in sections 3.1 and 3.2 of appendices C or C1 to this subpart, and the equipment-specific provisions in section 3.3 of appendix C or sections 4.5 through 4.8 of appendix C1.

(ii) For dedicated condensing units: Follow the general testing provisions in sections 3.1 and 3.2 of appendices C or

C1 to this subpart, and the product-specific provisions in section 3.4 of appendix C or sections 4.5 through 4.8 of appendix C1.

(iii) For single-packaged dedicated systems: Follow the general testing provisions in sections 3.1 and 3.2 of appendices C or C1 to this subpart, and the product-specific provisions in section 3.3 of appendix C or sections 4.5 through 4.8 of appendix C1.

■ 10. Revise appendix A to subpart R of part 431 to read as follows:

Appendix A to Subpart R of Part 431—Uniform Test Method for the Measurement of Energy Consumption of the Components of Envelopes of Walk-in Coolers and Walk-in Freezers

Note: Prior to [date 180 days after publication of final rule], representations with respect to the energy use of envelope components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with the applicable provisions of 10 CFR part 431, subpart R, appendix A, revised as of January 1, 2022. Beginning [date 180 days after publication of final rule], representations with respect to energy use of envelope components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with this appendix.

Incorporation by Reference

DOE incorporated by reference in § 431.303 the entire standards for NFRC 102–2020, and ASTM C1199–14. However, certain enumerated provisions of these standards, as set forth in sections 0.1 and 0.2 of this appendix are inapplicable. To the extent that there is a conflict between the terms or provisions of a referenced industry standard and the CFR, the CFR provisions control.

0.1 NFRC 102–2020

0.1.1 Section 1 Scope, is inapplicable as specified in section 5.1.1.1 of this appendix,

0.1.2 Section 4 Significance and Use, is inapplicable as specified in section 5.1.1.2 of this appendix,

0.1.3 Section 7.3 Test Conditions, is inapplicable as specified in section 5.1.1.3 of this appendix,

0.1.4 Section 10 Report, is inapplicable as specified in section 5.1.1.4 of this appendix,

0.1.5 Section 11 Precision and Bias, is inapplicable as specified in section 5.1.1.5 of this appendix,

0.1.6 Annex A3 Standard Test Method for Determining the Thermal Transmittance of Tubular Daylighting Devices, is inapplicable as specified in section 5.1.1.6 of this appendix, and

0.1.7 Annex A5 Tables and Figures, is inapplicable as specified in section 5.1.1.7 of this appendix.

0.2 ASTM C1199–14

0.2.1 Section 1 Scope, is inapplicable as specified in section 5.1.2.1 of this appendix,

0.2.2 Section 4 Significance and Use is inapplicable as specified in section 5.1.2.2 of this appendix,

0.2.3 Section 7.3 Test Conditions, is inapplicable as specified in section 5.1.2.3 of this appendix,

0.2.4 Section 10 Report, is inapplicable as specified in section 5.1.2.4 of this appendix, and

0.2.5 Section 11 Precision and Bias, is inapplicable as specified in section 5.1.2.5 of this appendix.

1. *General.* The following sections of this appendix provide additional instructions for testing. In cases where there is a conflict, the language of this appendix takes highest precedence, followed by NFRC 102–2020, followed by ASTM C1199–14. Any subsequent amendment to a referenced document by the standard-setting organization will not affect the test procedure in this appendix, unless and until the test procedure is amended by DOE. Material is incorporated as it exists on the date of the approval, and a notification of any change in the incorporation will be published in the **Federal Register**.

2. *Scope.*

This appendix covers the test requirements used to measure the energy consumption of the components that make up the envelope of a walk-in cooler or walk-in freezer.

3. *Definitions.*

The definitions contained in § 431.302 are applicable to this appendix.

4. *Additional Definitions.*

4.1 *Automatic door opener/closer* means a device or control system that “automatically” opens and closes doors without direct user contact, such as a motion sensor that senses when a forklift is approaching the entrance to a door and opens it, and then closes the door after the forklift has passed.

4.2 *Percent time off (PTO)* means the percent of time that an electrical device is assumed to be off.

4.3 *Rated power* means the input power of an electricity-consuming device as specified on the device’s nameplate. If the device does not have a nameplate or such nameplate does not list the device’s input power, then the rated power must be determined from the device’s product data sheet, literature, or installation instructions that come with the device or are available online.

4.4 *Rating conditions* means, unless explicitly stated otherwise, all conditions shown in Table A.1 of this appendix.

TABLE A.1—TEMPERATURE CONDITIONS

Internal Temperatures (cooled space within the envelope)	
Cooler Dry Bulb Temperature	35 °F.
Freezer Dry Bulb Temperature	– 10 °F.
External Temperatures (space external to the envelope)	
Freezer and Cooler Dry Bulb Temperatures.	75 °F.

5. *Test Methods and Measurements.*

5.1 U-factor Test of Doors and Display Panels.

Determine the U-factor of the entire door or display panel, including the frame, in accordance with the specified sections of NFRC 1022020 and ASTM C1199–14 at the temperature conditions listed in Table A.1 of this appendix; however, the following enumerated provisions of NFRC 102–2020

and ASTM C1199–14 are not applicable, as set forth in sections 5.1.1 and 5.1.2 of this appendix.

5.1.1 *Excepted sections of NFRC 102–2020.*

- 5.1.1.1 Section 1 Scope,
- 5.1.1.2 Section 4 Significance and Use,
- 5.1.1.3 Section 7.3 Test Conditions,
- 5.1.1.4 Section 10 Report,
- 5.1.1.5 Section 11 Precision and Bias,
- 5.1.1.6 Annex A3 Standard Test Method for Determining the Thermal Transmittance of Tubular Daylighting Devices, and
- 5.1.1.7 Annex A5 Tables and Figures.

- 5.1.2 *Excepted sections of ASTM C1199–14.*
- 5.1.2.1 Section 1 Scope,
- 5.1.2.2 Section 4 Significance and Use,
- 5.1.2.3 Section 7.3 Test Conditions,
- 5.1.2.4 Section 10 Report, and
- 5.1.2.5 Section 11 Precision and Bias.

5.2 Required Test Measurements.
5.2.1 For display doors and display panels, thermal transmittance, U_{dd} or U_{dp} , respectively, shall be the standardized thermal transmittance, U_{ST} , determined per section 5.1.1 of this appendix.

5.2.2 For non-display doors, thermal transmittance, U_{nd} , shall be the standardized thermal transmittance, U_{ST} , determined per section 5.1 of this appendix.

5.2.3 Projected area of the test specimen, A_s , in ft², as referenced in ASTM C1199–14.

6. *Calculations.*

6.1 Display Panels.

6.1.1 Determine the U-factor of the display panel in accordance with section 5.1 of this appendix, in units of Btu/(h·ft²·°F).

6.1.2 Calculate the temperature differential, ΔT_{dp} , °F, for the display panel, as follows:

$$\Delta T_{dp} = |T_{DB,ext,dp} - T_{DB,int,dp}| \quad (A-1)$$

Where:

$T_{DB,ext,dp}$ = dry-bulb air external temperature, °F, as prescribed in Table A.1 of this appendix; and

$T_{DB,int,dp}$ = dry-bulb air temperature internal to the cooler or freezer, °F, as prescribed in Table A.1 of this appendix.

6.1.3 Calculate the conduction load through the display panel, $Q_{cond,dp}$, Btu/h, as follows:

$$Q_{cond,dp} = A_s \times \Delta T_{dp} \times U_{dp} \quad (A-2)$$

Where:

A_s = projected area of the test specimen (same as the test specimen aperture in the surround panel) or the area used to

determine the U-factor in section 5.1 of this appendix, ft²;

ΔT_{dp} = temperature differential between refrigerated and adjacent zones, °F; and

U_{dp} = thermal transmittance, U-factor, of the display panel in accordance with section 5.1 of this appendix, Btu/(h·ft²·°F).

6.1.4 Calculate the total daily energy consumption, E_{dp} , kWh/day, as follows:

$$E_{dp} = \frac{Q_{cond,dp}}{EER} \times \frac{24 \text{ h} \times 1 \text{ kW}}{1 \text{ day} \times 1000 \text{ W}} \quad (A-3)$$

Where:

$Q_{cond,dp}$ = the conduction load through the display panel, Btu/h; and

EER = Energy Efficiency Ratio of walk-in (cooler or freezer), Btu/W-h. For coolers,

use EER = 12.4 Btu/W-h. For freezers, use EER = 6.3 Btu/W-h.

6.2 Display Doors.

6.2.1 Conduction Through Display Doors.

6.2.1.1 Determine the U-factor of the display door in accordance with section 5.1 of this appendix, in units of Btu/(h·ft²·°F).

6.2.1.2 Calculate the temperature differential, ΔT_{dd} , °F, for the display door as follows:

$$\Delta T_{dd} = |T_{DB,ext,dd} - T_{DB,int,dd}| \quad (A-4)$$

Where:

$T_{DB,ext,dd}$ = dry-bulb air temperature external to the display door, °F, as prescribed in Table A.1 of this appendix; and

$T_{DB,int,dd}$ = dry-bulb air temperature internal to the display door, °F, as prescribed in Table A.1 of this appendix.

6.2.1.3 Calculate the conduction load through the display doors, $Q_{cond,dd}$, Btu/h, as follows:

$$Q_{cond,dd} = A_s \times \Delta T_{dd} \times U_{dd} \quad (A-5)$$

Where:

A_s = projected area of the test specimen (same as the test specimen aperture in the surround panel) or the area used to determine the U-factor in section 5.1 of this appendix, ft²;

ΔT_{dd} = temperature differential between refrigerated and adjacent zones, °F; and
 U_{dd} = thermal transmittance, U-factor of the door, in accordance with section 5.1 of this appendix, Btu/(h·ft²·°F).

6.2.1.4 Calculate the total daily energy consumption due to conduction thermal load, $E_{dd,thermal}$, kWh/day, as follows:

$$E_{dd,thermal} = \frac{Q_{cond,dd}}{EER} \times \frac{24 \text{ h} \times 1 \text{ kW}}{1 \text{ day} \times 1000 \text{ W}} \quad (A-6)$$

Where:

$Q_{cond,dd}$ = the conduction load through the display door, Btu/h; and
 EER = EER of walk-in (cooler or freezer), Btu/W-h. For coolers, use $EER = 12.4$ Btu/(W-h). For freezers, use $EER = 6.3$ Btu/(W-h).

6.2.2 Direct Energy Consumption of Electrical Component(s) of Display Doors.

Electrical components associated with display doors could include but are not limited to: Heater wire (for anti-sweat or anti-freeze application); lights; door motors; control system units; and sensors.

6.2.2.1 Select the required value for percent time off (PTO) for each type of electricity-consuming device per Table A.2 of this appendix, PTO_t (%).

TABLE A.2—PERCENT TIME OFF VALUES

Device	Temperature condition	Controls	Percent time off value (%)
Lights	All	Without	25
		With	50
Anti-sweat heaters	All	Without	0
	Coolers	With	75
	Freezers	With	50
Door motors	All	Without	97
All other electricity-consuming devices	All	Without	0
		With	25

6.2.2.2 Calculate the power usage for each type of electricity-consuming device, $P_{dd,comp,u,t}$, kWh/day, as follows:

$$P_{dd,comp,u,t} = P_{rated,u,t} \times (1 - PTO_{u,t}) \times n_{u,t} \times \frac{24 \text{ h}}{\text{day}} \quad (A-7)$$

Where:

u = the index for each of type of electricity-consuming device located on either (1) the interior facing side of the display door or within the inside portion of the display door, (2) the exterior facing side of the display door, or (3) any combination of (1) and (2). For purposes of this calculation, the interior index is represented by $u = \text{int}$ and the exterior

index is represented by $u = \text{ext}$. If the electrical component is both on the interior and exterior side of the display door then use $u = \text{int}$. For anti-sweat heaters sited anywhere in the display door, 75 percent of the total power is be attributed to $u = \text{int}$ and 25 percent of the total power is attributed to $u = \text{ext}$;
 t = index for each type of electricity-consuming device with identical rated power;

$P_{rated,u,t}$ = rated input power of each component, of type t , kW;
 $PTO_{u,t}$ = percent time off, for device of type t , %; and

$n_{u,t}$ = number of devices at the rated input power of type t , unitless.

6.2.2.3 Calculate the total electrical energy consumption for interior and exterior power, $P_{dd,tot,int}$ (kWh/day) and $P_{dd,tot,ext}$ (kWh/day), respectively, as follows:

$$P_{dd,tot,int} = \sum_1^t P_{dd,comp,int,t} \quad (A-8)$$

$$P_{dd,tot,ext} = \sum_1^t P_{dd,comp,ext,t} \quad (A-9)$$

Where:

t = index for each type of electricity-consuming device with identical rated input power;

$P_{dd,comp,int,t}$ = the energy usage for an electricity-consuming device sited on the interior facing side of or in the display door, of type t, kWh/day; and
 $P_{dd,comp,ext,t}$ = the energy usage for an electricity-consuming device sited on the

external facing side of the display door, of type t, kWh/day.

6.2.2.4 Calculate the total electrical energy consumption, $P_{dd,tot}$, (kWh/day), as follows:

$$P_{dd,tot} = P_{dd,tot,int} + P_{dd,tot,ext} \quad (A-10)$$

Where:

$P_{dd,tot,int}$ = the total interior electrical energy usage for the display door, kWh/day; and

$P_{dd,tot,ext}$ = the total exterior electrical energy usage for the display door, kWh/day.
 6.2.3 Total Indirect Electricity Consumption Due to Electrical Devices.

Calculate the additional refrigeration energy consumption due to thermal output from electrical components sited inside the display door, $C_{dd,load}$, kWh/day, as follows:

$$C_{dd,load} = P_{dd,tot,int} \times \frac{3.412 \text{ Btu/(Wh)}}{EER} \quad (A-11)$$

Where:

$P_{dd,tot,int}$ = The total internal electrical energy consumption due for the display door, kWh/day; and

EER = EER of walk-in cooler or walk-in freezer, Btu/W-h. For coolers, use EER = 12.4 Btu/(W-h). For freezers, use EER = 6.3 Btu/(W-h).

6.2.4 Total Display Door Energy Consumption.

Calculate the total energy, $E_{dd,tot}$, kWh/day,

$$E_{dd,tot} = E_{dd,thermal} + P_{dd,tot} + C_{dd,load} \quad (A-12)$$

Where:

$E_{dd,thermal}$ = the total daily energy consumption due to thermal load for the display door, kWh/day;

$P_{dd,tot}$ = the total electrical load, kWh/day; and

$C_{dd,load}$ = additional refrigeration load due to thermal output from electrical components contained within the display door, kWh/day.

6.3 Non-Display Doors.
 6.3.1 Conduction Through Non-Display Doors.

6.3.1.1 Determine the U-factor of the non-display door in accordance with section 5.1 of this appendix, in units of Btu/(h-ft²-°F).

6.3.1.2 Calculate the temperature differential of the non-display door, ΔT_{nd} , °F, as follows:

$$\Delta T_{nd} = |T_{DB,ext,nd} - T_{DB,int,nd}| \quad (A-13)$$

Where:

$T_{DB,ext,nd}$ = dry-bulb air external temperature, °F, as prescribed by Table A.1 of this appendix; and

$T_{DB,int,nd}$ = dry-bulb air internal temperature, °F, as prescribed by Table A.1 of this appendix. If the component spans both

cooler and freezer spaces, the freezer temperature must be used.

6.3.1.3 Calculate the conduction load through the non-display door: $Q_{cond,nd}$, Btu/h,

$$Q_{cond,nd} = A_s \times \Delta T_{nd} \times U_{nd} \quad (A-14)$$

Where:

A_s = projected area of the test specimen (same as the test specimen aperture in the surround panel) or the area used to determine the U-factor in section 5.1 of this appendix, ft²;

ΔT_{nd} = temperature differential across the non-display door, °F; and
 U_{nd} = thermal transmittance, U-factor of the door, in accordance with section 5.1 of this appendix, Btu/(h-ft²-°F).

6.3.1.4 Calculate the total daily energy consumption due to thermal load, $E_{nd,thermal}$, kWh/day, as follows:

$$E_{nd,thermal} = \frac{Q_{cond,nd}}{EER} \times \frac{24 \text{ h} \times 1 \text{ kW}}{1 \text{ day} \times 1000 \text{ W}} \quad (A-15)$$

Where:

$Q_{\text{cond,nd}}$ = the conduction load through the non-display door, Btu/h; and
 EER = EER of walk-in (cooler or freezer), Btu/W-h. For coolers, use $\text{EER} = 12.4 \text{ Btu/(W-h)}$. For freezers, use $\text{EER} = 6.3 \text{ Btu/(W-h)}$.

6.3.2 Direct Energy Consumption of Electrical Components of Non-Display Doors. Electrical components associated with non-display doors comprise could include, but are not limited to: Heater wire (for anti-sweat or anti-freeze application), lights, door motors, control system units, and sensors.

6.3.2.1 Select the required value for percent time off for each type of electricity-consuming device per Table A.2 of this appendix, PTO_t (%).

6.3.2.2 Calculate the power usage for each type of electricity-consuming device, $P_{\text{nd,comp,u,t}}$, kWh/day, as follows:

$$P_{\text{nd,comp,u,t}} = P_{\text{rated,u,t}} \times (1 - \text{PTO}_{u,t}) \times n_{u,t} \times \frac{24 \text{ h}}{\text{day}} \quad (\text{A-16})$$

Where:

u = the index for each of type of electricity-consuming device located on either (1) the interior facing side of the non-display door or within the inside portion of the non-display door, (2) the exterior facing side of the non-display door, or (3) any combination of (1) and (2). For purposes of this calculation, the interior index is represented by $u = \text{int}$ and the exterior index is represented by $u = \text{ext}$.

If the electrical component is both on the interior and exterior side of the non-display door then use $u = \text{int}$. For anti-sweat heaters sited anywhere in the non-display door, 75 percent of the total power is attributed to $u = \text{int}$ and 25 percent of the total power is attributed to $u = \text{ext}$;
 t = index for each type of electricity-consuming device with identical rated input power;

$P_{\text{rated,u,t}}$ = rated input power of each component, of type t , kW;
 $\text{PTO}_{u,t}$ = percent time off, for device of type t , %; and

$n_{u,t}$ = number of devices at the rated input power of type t , unitless.

6.3.2.3 Calculate the total electrical energy consumption for interior and exterior power, $P_{\text{nd,tot,int}}$, kWh/day, and $P_{\text{nd,tot,ext}}$, kWh/day, respectively, as follows:

$$P_{\text{nd,tot,int}} = \sum_1^t P_{\text{nd,comp,int,t}} \quad (\text{A-17})$$

$$P_{\text{nd,tot,ext}} = \sum_1^t P_{\text{nd,comp,ext,t}} \quad (\text{A-18})$$

Where:

t = index for each type of electricity-consuming device with identical rated input power;

$P_{\text{nd,comp,int,t}}$ = the energy usage for an electricity-consuming device sited on the

internal facing side or internal to the non-display door, of type t , kWh/day; and

$P_{\text{nd,comp,ext,t}}$ = the energy usage for an electricity-consuming device sited on the external facing side of the non-display

door, of type t , kWh/day. For anti-sweat heaters,

6.3.2.4 Calculate the total electrical energy consumption, $P_{\text{nd,tot}}$, kWh/day, as follows:

$$P_{\text{nd,tot}} = P_{\text{nd,tot,int}} + P_{\text{nd,tot,ext}} \quad (\text{A-19})$$

Where:

$P_{\text{nd,tot,int}}$ = the total interior electrical energy usage for the non-display door, of type t , kWh/day; and

$P_{\text{nd,tot,ext}}$ = the total exterior electrical energy usage for the non-display door, of type t , kWh/day.

6.3.3 Total Indirect Electricity Consumption Due to Electrical Devices.

Calculate the additional refrigeration energy consumption due to thermal output from electrical components associated with the non-display door, $C_{\text{nd,load}}$, kWh/day, as follows:

$$C_{\text{nd,load}} = P_{\text{nd,tot,int}} \times \frac{3.412 \text{ Btu/(Wh)}}{\text{EER}} \quad (\text{A-20})$$

Where:

$P_{\text{nd,tot,int}}$ = the total interior electrical energy consumption for the non-display door, kWh/day; and

EER = EER of walk-in cooler or freezer, Btu/W-h. For coolers, use $\text{EER} = 12.4 \text{ Btu/(W-h)}$. For freezers, use $\text{EER} = 6.3 \text{ Btu/(W-h)}$.

6.3.4 Total Non-Display Door Energy Consumption.

Calculate the total energy, $E_{\text{nd,tot}}$, kWh/day, as follows:

$$E_{\text{nd,tot}} = E_{\text{nd,thermal}} + P_{\text{nd,tot}} + C_{\text{nd,load}} \quad (\text{A-12})$$

Where:

$E_{\text{nd,thermal}}$ = the total daily energy consumption due to thermal load for the non-display door, kWh/day;

$P_{\text{nd,tot}}$ = the total electrical energy consumption, kWh/day; and
 $C_{\text{nd,load}}$ = additional refrigeration load due to thermal output from electrical

components contained on the inside face of the non-display door, kWh/day.

■ 11. Revise appendix B to subpart R of part 431 to read as follows:

Appendix B to Subpart R of Part 431—Uniform Test Method for the Measurement of R-Value of Insulation for Envelope Components of Walk-In Coolers and Walk-In Freezers

Note: Prior to [date 180 days after publication of final rule], representations with respect to the R-value for insulation of envelope components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with the applicable provisions of 10 CFR part 431, subpart R, appendix B, revised as of January 1, 2022. Beginning [date 180 days after publication of final rule], representations with respect to R-value for insulation of envelope components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with this appendix.

0. *Incorporation by Reference.*

DOE incorporated by reference in § 431.303 the entire standard for ASTM C518–17. However, certain enumerated provisions of ASTM C518–17, as set forth in section 0.1 of this appendix, are inapplicable. To the extent there is a conflict between the terms or provisions of a referenced industry standard and the CFR, the CFR provisions control.

0.1 ASTM C518–17

0.1.1 Section 1 Scope, is inapplicable as specified in section 5.3.1.1 of this appendix,

0.1.2 Section 4 Significance and Use, is inapplicable as specified in section 5.3.1.2 of this appendix,

0.1.3 Section 7.3 Specimen Conditioning, is inapplicable as specified in section 5.3.1.3 of this appendix,

0.1.4 Section 9 Report, is inapplicable as specified in section 5.3.1.4 of this appendix,

0.1.5 Section 10 Precision and Bias, is inapplicable as specified in section 5.3.1.5 of this appendix,

0.1.6 Section 11 Keywords, is inapplicable as specified in section 5.3.1.6 of this appendix,

0.1.7 Annex A2 Equipment Error Analysis, is inapplicable as specified in section 5.3.1.7 of this appendix,

0.1.8 Appendix X1 is inapplicable as specified in section 5.3.1.8 of this appendix,

0.1.9 Appendix X2 Response of Heat Flux Transducers, is inapplicable as specified in section 5.3.1.9 of this appendix, and

0.1.10 Appendix X3 Proven Performance of a Heat Flow Apparatus, is inapplicable as specified in section 5.3.1.10 of this appendix.

1. *General.*

The following sections of this appendix provide additional instructions for testing. In cases where there is a conflict, the language of this appendix takes highest precedence, followed by ASTM C518–17. Any subsequent amendment to a referenced document by the standard-setting organization will not affect the test procedure in this appendix, unless and until the test procedure is amended by DOE. Material is incorporated as it exists on the date of the approval, and a notification of any change in the incorporation will be published in the **Federal Register**.

2. *Scope.*

This appendix covers the test requirements used to measure the R-value of non-display panels and non-display doors of a walk-in cooler or walk-in freezer.

3. *Definitions.*

The definitions contained in § 431.302 apply to this appendix.

4. *Additional Definitions.*

4.1 *Edge region* means a region of the envelope component that is wide enough to encompass any framing members. If the envelope component contains framing members (e.g., a wood frame) then the width of the edge region must be as wide as any

framing member plus an additional 2 in. ± 0.25 in.

5. *Test Methods, Measurements, and Calculations.*

5.1 *General.* Foam shall be tested after it is produced in its final chemical form. For foam produced inside of an envelope component (“foam-in-place”), “final chemical form” means the foam is cured as intended and ready for use as a finished envelope component. For foam produced as board stock (e.g., polystyrene), “final chemical form” means after extrusion and ready for assembly into an envelope component or after assembly into an envelope component. Foam must not include any structural members or non-foam materials during testing in accordance with ASTM C518–17. When preparing the specimen for test, a high-speed bandsaw or a meat slicer are two types of recommended cutting tools. Hot wire cutters or other heated tools shall not be used for cutting foam test specimens.

5.2 *Specimen Preparation.*

5.2.1 *Determining the thickness around the perimeter of the envelope component, t_p .* The full thickness of an envelope component around the perimeter, which may include facers on one or both sides, shall be determined as follows:

5.2.1.1 At least 8 thickness measurements shall be taken around the perimeter of the envelope component, at least 2 inches from the edge region, and avoiding any regions with hardware or fixtures.

5.2.1.2 The average of the thickness measurements taken around the perimeter of the envelope component shall be the thickness around the perimeter of the envelope component, t_p .

5.2.1.3 Measure and record the width, w_p , and height, h_p , of the envelope component. The surface area of the envelope component, A_p , shall be determined as follows:

$$A_p = w_p \times h_p \quad (\text{B-1})$$

Where:

w_p = width of the envelope component, in.; and

h_p = height of the envelope component, in.

5.2.2. *Removing the sample from the envelope component.*

5.2.2.1. Determine the center of the envelope component relative to its height and its width.

5.2.2.2. Cut a sample from the envelope component that is at least the length and width dimensions of the heat flow meter, and where the marked center of the sample is at least 3 inches from any cut edge.

5.2.2.3. If the center of the envelope component contains any non-foam components (excluding facers), additional samples may be cut adjacent to the previous cut that is at least the length and width dimensions of the heat flow meter and is greater than 12 inches from the edge region.

5.2.3. *Determining the thickness at the center of the envelope component, t_c .* The full thickness of an envelope component at the center, which may include facers on one or both sides, shall be determined as follows:

5.2.3.1. At least 2 thickness measurements shall be taken in each

quadrant of the cut sample removed from the envelope component per section 5.2.2 of this appendix, for a total of at least 8 measurements.

5.2.3.2. The average of the thickness measurements of the cut sample removed from the envelope component shall be the overall thickness of the cut sample, t_c .

5.2.3.3. Measure and record the width and height of the cut sample removed from the envelope component. The surface area of the cut sample removed from the envelope component, A_c , shall be determined as follows:

$$A_c = w_c \times h_c \quad (\text{B-2})$$

Where:

w_c = width of the cut sample removed from the envelope component, in.; and

h_c = height of the cut sample removed from the envelope component, in.

5.2.4. *Determining the total thickness of the foam within the envelope component, t_{foam} .* The average total thickness of the foam

sample, without facers, shall be determined as follows:

5.2.4.1. Remove the facers on the envelope component sample, while minimally disturbing the foam.

5.2.4.2. Measure the thickness of each facer in 4 locations for a total of 4 measurements if 1 facer is removed, and a total of 8 measurements if 2 facers are removed. The average of all facer

measurements shall be the thickness of the facers, t_{facers} , in.

5.2.4.3. The average total thickness of the foam, t_{foam} , in., shall be determined as follows:

$$t_{foam} = \frac{t_c A_c + t_p (A_p - A_c)}{A_p} - t_{facers} \quad (B-3)$$

Where:

t_c = the average thickness of the center of the envelope component, in., as determined per sections 5.2.3.1 and 5.2.3.2 of this appendix;

A_c = the surface area of the center of the envelope component, in²., as determined per section 5.2.3.3 of this appendix;

t_p = the average thickness of the perimeter of the envelope component, in., as determined per sections 5.2.1.1 and 5.2.1.2 of this appendix;

A_p = the average thickness of the center of the envelope component, in²., as determined per section 5.2.1.3 of this appendix;

t_{facers} = the average thickness of the facers of the envelope component, in., as determined per section 5.2.4.2 of this appendix.

5.2.5 *Cutting, measuring, and determining parallelism and flatness of a 1-inch-thick specimen for test from the center of the cut envelope component sample.*

5.2.5.1 Cut a 1 ±0.1-inch-thick specimen from the center of the cut envelope sample. The 1-inch-thick test specimen shall be cut from the point that is equidistant from both edges of the sample (*i.e.*, shall be cut from the center point that would be directly between the interior and exterior space of the walk-in).

5.2.5.2 Document through measurement or photographs with measurement indicators that the specimen was taken from the center of the sample.

5.2.5.3 After the 1-inch specimen has been cut, and prior to testing, place the specimen on a flat surface and allow gravity to determine the specimen's position on the surface. This will be side 1.

5.2.5.4 To determine the flatness of side 1, take at least nine height measurements at equidistant positions on the specimen (*i.e.*,

the specimen would be divided into 9 regions and height measurements taken at the center of each of these nine regions). Contact with the measurement indicator shall not indent the foam surface. From the height measurements taken, determine the least squares plane for side 1. For each measurement location, calculate the theoretical height from the least squares plane for side 1. Then, calculate the difference between the measured height and the theoretical least squares plane height at each location. The maximum difference minus the minimum difference out of the nine measurement locations is the flatness of side 1. For side 1 of the specimen to be considered flat, this shall be less than or equal to 0.03 inches.

5.2.5.5 To determine the flatness of side 2, turn the specimen over and allow gravity to determine the specimen's position on the surface. Repeat section 5.2.5.4 to determine the flatness of side 2.

5.2.5.6 To determine the parallelism of the specimen for side 1, calculate the theoretical height of the least squares plane at the furthest corners (*i.e.*, at points (0,0), (0,12), (12,0), and (12,12)) of the 12-inch by 12-inch test specimen. The difference between the maximum theoretical height and the minimum theoretical height shall be less than or equal to 0.03 inches for each side in order for side 1 to be considered parallel.

5.2.5.7 To determine the parallelism of the specimen for side 2, repeat section 5.2.5.6.

5.2.5.8 The average thickness of the test specimen, L , shall be 1 ±0.1-inches determined using a minimum of 18 thickness measurements (*i.e.*, a minimum of 9 measurements on side 1 of the specimen and a minimum of 9 on side 2 of the specimen). This average thickness shall be used to

determine the thermal conductivity, or K-factor.

5.3 *K-factor Test.* Determine the thermal conductivity, or K-factor, of the 1-inch-thick specimen in accordance with the specified sections of ASTM C518–17; however, the following enumerated provisions of ASTM C518–17 are not applicable, as set forth in section 5.3.1 of this appendix. Testing must be completed within 24 hours of the specimen being cut for testing per section 5.2.5 of this appendix.

5.3.1 *Excepted sections of ASTM C518–17.*

5.3.1.1 Section 1 Scope,
5.3.1.2 Section 4 Significance and Use,
5.3.1.3 Section 7.3 Specimen

Conditioning,

5.3.1.4 Section 9 Report,
5.3.1.5 Section 10 Precision and Bias,
5.3.1.6 Section 11 Keywords,
5.3.1.7 Annex A2 Equipment Error

Analysis,

5.3.1.8 Appendix X1,
5.3.1.9 Appendix X2 Response of Heat Flux Transducers, and

5.3.1.10 Appendix X3 Proven Performance of a Heat Flow Apparatus.

5.3.2 *Test Conditions.*

5.3.2.1 For freezer envelope components, the K-factor of the specimen shall be determined at an average specimen temperature of 20 ±1 degrees Fahrenheit.

5.3.2.2 For cooler envelope components, the K-factor of the specimen shall be determined at an average specimen temperature of 55 ±1 degrees Fahrenheit.

5.4 *R-value Calculation.*

5.4.1 For envelope components consisting of one homogeneous layer of insulation, calculate the R-value, h-ft²-°F/Btu, as follows:

$$R = \frac{t_{foam}}{\lambda} \quad (B-4)$$

Where:

t_{foam} = the total thickness of the foam, in., as determined in section 5.2.4 of this appendix; and

λ = K-factor, Btu-in/(h-ft²-°F), as determined in section 5.3 of this appendix.

5.4.2 For envelope components consisting of two or more layers of dissimilar insulating materials (excluding facers or protective skins), determine the K-factor of each material as described in sections 5.1 through 5.3 of this appendix. For an envelope

component with N layers of insulating material, the overall R-value shall be calculated as follows:

$$R = \sum_{i=1}^N \frac{t_i}{\lambda_i} \quad (B-5)$$

Where:

t_i is the thickness of the *i*th material that appears in the envelope component,

inches, as determined in section 5.2.4 of this appendix;

λ_i is the k factor of the *i*th material, Btu-in/(h-ft²-°F), as determined in section 5.3 of this appendix; and

N is the total number of material layers that appears in the envelope component.

5.4.3 K-factor test results from a test sample 1 ± 0.1 -inches in thickness may be used to determine the R-value of envelope components with various foam thicknesses as long as the foam throughout the panel depth is of the same final chemical form and the test was completed at the same test conditions that the other envelope components would be used at. For example, a K-factor test result conducted at cooler conditions cannot be used to determine R-value of a freezer envelope component.

■ 12. Amend appendix C to subpart R of part 431 by:

- a. Adding a note to the beginning of the appendix;
- b. Revising sections 2.0 and 3.1.1;
- c. Adding sections 3.1.6 and 3.1.7;
- d. Revising sections 3.2.1 and 3.2.3;
- e. Adding sections 3.2.6, 3.2.7, 3.2.7.1, 3.2.7.2, 3.2.7.3, and 3.2.8;
- f. Revising sections 3.3.1 and 3.3.3;
- g. Adding sections 3.3.3.1, 3.3.3.2, 3.3.3.3, 3.3.3.3.1, and 3.3.3.3.2;
- h. Revising sections 3.3.7, 3.3.7.1, and 3.3.7.2;
- i. Adding sections 3.3.7.3, 3.3.7.3.1, and 3.3.7.3.2; and
- j. Revising section 3.4.2.1.

The additions and revisions read as follows:

Appendix C to Subpart R of Part 431—Uniform Test Method for the Measurement of Net Capacity and AWEF of Walk-In Cooler and Walk-In Freezer Refrigeration Systems

Note: Prior to [date 180 days after publication of final rule], representations with respect to the energy use of refrigeration components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with the applicable provisions of this appendix as they appeared in 10 CFR part 431, subpart R, appendix C, revised as of January 1, 2022. Beginning [date 180 days after publication of final rule], representations with respect to energy use of refrigeration components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with this appendix.

For any amended standards for walk-in coolers and freezers published after January 1, 2022, manufacturers must use the results of testing under appendix C1 of this part to determine compliance. Representations related to energy consumption must be made in accordance with appendix C1 of this part when determining compliance with the relevant standard. Manufacturers may also use appendix C1 of this part to certify compliance with any amended standards prior to the applicable compliance date for those standards.

* * * * *

2.0 Definitions.

The definitions contained in § 431.302 and AHRI 1250–2009 (incorporated by reference;

see § 431.303) apply to this appendix. When definitions contained in the standards DOE has incorporated by reference are in conflict or when they conflict with this section, the hierarchy of precedence shall be in the following order: § 431.302, AHRI 1250–2009, and then either AHRI 420–2008 (incorporated by reference; see § 431.303) for unit coolers or ASHRAE 23.1–2010 (incorporated by reference; see § 431.303) for dedicated condensing units.

The term “unit cooler” used in AHRI 1250–2009, AHRI 420–2008, and this subpart shall be considered to address both “unit coolers” and “ducted fan-coil units,” as appropriate.

3.0 * * *

3.1. * * *

3.1.1. In Table 1, Instrumentation

Accuracy, refrigerant temperature measurements shall have an accuracy of ± 0.5 °F for unit cooler in/out. When testing high-temperature refrigeration systems, measurements used to determine temperature or water vapor content of the air (*i.e.* wet bulb or dew point) shall be accurate to within ± 0.25 °F; all other temperature measurements shall be accurate to within ± 1.0 °F.

* * * * *

3.1.6. Test Operating Conditions for CO₂ Unit Coolers.

For medium-temperature CO₂ unit coolers, conduct tests using the test conditions specified in Table 17 of this appendix. For low-temperature CO₂ unit coolers, conduct tests using the test conditions specified in Table 18 of this appendix.

TABLE 17—TEST OPERATING CONDITIONS FOR MEDIUM-TEMPERATURE CO₂ UNIT COOLERS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Suction dew point temp, °F	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor capacity	Test objective
Off-Cycle Power	35	<50	.....	.....	.....	Compressor On	Measure fan input power during compressor off cycle.
Refrigeration Capacity, Ambient Condition A.	35	<50	25	38	5	Compressor Off	Determine Net Refrigeration Capacity of Unit Cooler.

Notes:

1. Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.

TABLE 18—TEST OPERATING CONDITIONS FOR LOW-TEMPERATURE CO₂ UNIT COOLERS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Suction dew point temp, °F	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor capacity	Test objective
Off-Cycle Power	–10	<50	.....	.....	.....	Compressor Off	Measure fan input power during compressor off cycle.
Refrigeration Capacity, Ambient Condition A.	–10	<50	–20	38	5	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler.
Defrost	–10	<50	.....	.....	.....	Compressor Off	Test according to Appendix C Section C11 of AHRI 1250–2009.

Notes:

1. Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.

3.1.7. Test Operating Conditions for High-Temperature Unit Coolers.

For high temperature cooler unit coolers, conduct tests using the test conditions specified in Table 19 of this appendix.

TABLE 19—TEST OPERATING CONDITIONS FOR HIGH-TEMPERATURE UNIT COOLERS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, % ¹	Suction dew point temp, °F ^{2,3}	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor capacity	Test objective
Off-Cycle	55	55	.....	105	9	Compressor Off	Measure fan input power.
Refrigeration Capacity Suction A.	55	55	38	105	9	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler.

Notes:

1. The test condition tolerance (maximum permissible variation of the average value of the measurement from the specified test condition) for relative humidity is 3%.
2. Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.
3. Suction Dew Point shall be measured at the Unit Cooler Exit.

3.2. * * *

3.2.1. Refrigerant Temperature Measurements.

In AHRI 1250–2009 appendix C, section C3.1.6, any refrigerant temperature measurements entering and leaving the unit cooler may use sheathed sensors immersed in the flowing refrigerant instead of thermometer wells. When testing a condensing unit alone, measure refrigerant liquid temperature leaving the condensing unit using thermometer wells as described in AHRI 1250–2009 appendix C, section C3.1.6 or sheathed sensors immersed in the flowing refrigerant. For all of these cases, if the refrigerant tube outer diameter is less than ½ inch, the refrigerant temperature may be measured using the average of two temperature measuring instruments with a minimum accuracy of ±0.5 °F placed on opposite sides of the refrigerant tube surface—resulting in a total of up to 8 temperature measurement devices used for the DX Dual Instrumentation method. In this case, the refrigerant tube shall be insulated with 1-inch thick insulation from a point 6 inches upstream of the measurement location to a point 6 inches downstream of the measurement location. Also, to comply with this requirement, the unit cooler entering measurement location may be moved to a location 6 inches upstream of the expansion device and, when testing a condensing unit alone, the entering and leaving measurement locations may be moved to locations 6 inches from the respective service valves.

* * * * *

3.2.3. Subcooling at Refrigerant Mass Flow Meter.

In appendix C, Section C3.4.5 of AHRI 1250–2009 (incorporated by reference; see § 431.303), and in Section 7.1.2 of ASHRAE

23.1–2010 (incorporated by reference; see § 431.303) when verifying sub-cooling at the mass flow meters, only the sight glass and a temperature sensor located on the tube surface under the insulation are required. Subcooling shall be verified to be within the 3 °F requirement downstream of flow meters located in the same chamber as a condensing unit under test and upstream of flow meters located in the same chamber as a unit cooler under test, rather than always downstream as indicated in AHRI 1250–2009, Section C3.4.5 or always upstream as indicated in Section 7.1.2 of ASHRAE 23.1–2010. If the subcooling is less than 3 °F, cool the line between the condensing unit outlet and this location to achieve the required subcooling. When providing such cooling while testing a matched pair, also measure the refrigerant temperature upstream of the location at which the line is being cooled, and increase the temperature used to calculate unit cooler entering enthalpy by the difference between the upstream and downstream temperatures.

* * * * *

3.2.6. Installation Instructions.

Manufacturer installation instructions or installation instructions described in this section refer to the instructions that come packaged with or appear on the labels applied to the unit. This does not include online manuals or materials.

Installation Instruction Hierarchy: If a given installation instruction provided on the label(s) applied to the unit conflicts with the installation instructions that are shipped with the unit, the label takes precedence. For testing of matched pairs, the installation instructions for the dedicated condensing unit shall take precedence. Setup shall be in accordance with the field installation instructions (laboratory installation

instructions shall not be used). Achieving test conditions shall always take precedence over installation instructions.

3.2.7. Refrigerant Charging and Adjustment of Superheat and Subcooling.

All test samples shall be charged, and superheat and/or subcooling shall be set, at Refrigeration A test conditions unless otherwise specified in the installation instructions. If the installation instructions give a specified range for superheat, subcooling, or refrigerant pressure, the average of the range shall be used as the refrigerant charging parameter target and the test condition tolerance shall be ±50 percent of the range. Perform charging of near-azeotropic and zeotropic refrigerants only with refrigerant in the liquid state. Once the correct refrigerant charge is determined, all tests shall run until completion without further modification.

3.2.7.1. When charging or adjusting superheat/subcooling, use all pertinent instructions contained in the installation instructions to achieve charging parameters within the tolerances. However, in the event of conflicting charging information between installation instructions, follow the installation instruction hierarchy listed in section 3.2.6. of this appendix. Conflicting information is defined as multiple conditions given for charge adjustment where all conditions specified cannot be met. In the event of conflicting information within the same set of charging instructions (e.g., the installation instructions shipped with the dedicated condensing unit), follow the hierarchy in Table 1 of this section for priority. Unless the installation instructions specify a different charging tolerance, the tolerances identified in Table 1 of this section shall be used.

TABLE 1—TEST CONDITION TOLERANCES AND HIERARCHY FOR REFRIGERANT CHARGING AND SETTING OF REFRIGERANT CONDITIONS

Priority	Fixed orifice		Expansion valve	
	Parameter with installation instruction target	Tolerance	Parameter with installation instruction target	Tolerance
1	Super-heat	± 2.0 °F	Sub-cooling	10% of the Target Value; No less than ±0.5 °F, No more than ±2.0 °F.

TABLE 1—TEST CONDITION TOLERANCES AND HIERARCHY FOR REFRIGERANT CHARGING AND SETTING OF REFRIGERANT CONDITIONS—Continued

Priority	Fixed orifice		Expansion valve	
	Parameter with installation instruction target	Tolerance	Parameter with installation instruction target	Tolerance
2	High Side Pressure or Saturation Temperature.	±4.0 psi or ±1.0 °F ..	High Side Pressure or Saturation Temperature.	±4.0 psi or ±1.0 °F.
3	Low Side Pressure or Saturation Temperature.	±2.0 psi or ±0.8 °F ..	Super-heat	±2.0 °F.
4	Low Side Temperature	±2.0 °F	Low Side Pressure or Saturation Temperature.	±2.0 psi or ±0.8 °F.
5	High Side Temperature	±2.0 °F	Approach Temperature.	±1.0 °F.
6	Charge Weight	±2.0 oz	Charge Weight	0.5% or 1.0 oz, whichever is greater.

3.2.7.2. *Dedicated Condensing Unit.* If the Dedicated Condensing Unit includes a receiver and the subcooling target leaving the condensing unit provided in installation instructions cannot be met without fully filling the receiver, the subcooling target shall be ignored. Likewise, if the Dedicated Condensing unit does not include a receiver and the subcooling target leaving the condensing unit cannot be met without the unit cycling off on high pressure, the subcooling target can be ignored. Also, if no instructions for charging or for setting subcooling leaving the condensing unit are provided in the installation instructions, the refrigeration system shall be set up with a charge quantity and/or exit subcooling such that the unit operates during testing without shutdown (e.g., on a high-pressure switch) and operation of the unit is otherwise consistent with the requirements of the test procedure of this appendix and the installation instructions.

3.2.7.3. *Unit Cooler.* Use the shipped expansion device for testing. Otherwise, use the expansion device specified in the installation instructions. If the installation instructions specify multiple options for the expansion device, any specified expansion device may be used. The supplied expansion device shall be adjusted until either the superheat target is met, or the device reaches the end of its adjustable range. In the event the device reaches the end of its adjustable range and the super heat target is not met, test with the adjustment at the end of its range providing the closest match to the superheat target, and the test condition tolerance for super heat target shall be ignored. The measured superheat is not subject to a test operating tolerance. However, if the evaporator exit condition is used to determine capacity using the DX dual-instrumentation method or the refrigerant enthalpy method, individual superheat value measurements may not be equal to or less than zero. If this occurs, or if the operating tolerances of measurements affected by expansion device fluctuation are exceeded, the expansion device shall be replaced, operated at an average superheat value higher than the target, or both, in order to avoid individual superheat value

measurements less than zero and/or to meet the required operating tolerances.

3.2.8. *Chamber Conditioning using the Unit Under Test.*

In appendix C, Section C6.2 of AHRI 1250–2009, for applicable system configurations (matched pairs, single-packaged refrigeration systems, and standalone unit coolers), the unit under test may be used to aid in achieving the required test chamber conditions prior to beginning any steady state test. However, the unit under test must be inspected and confirmed to be free from frost before initiating steady state testing.

3.3. * * *

3.3.1. For unit coolers tested alone, use test procedures described in AHRI 1250–2009 for testing unit coolers for use in mix-match system ratings, except that for the test conditions in Tables 15 and 16 of this appendix, use the Suction A saturation condition test points only. Also for unit coolers tested alone, other than high-temperature unit coolers, use the calculations in section 7.9 to determine AWEF and net capacity described in AHRI 1250–2009 for unit coolers matched to parallel rack systems.

* * *

3.3.3. *Evaporator Fan Power.*

3.3.3.1. *Ducted Evaporator Air.*

For ducted fan-coil units with ducted evaporator air, or that can be installed with or without ducted evaporator air: Connect ductwork on both the inlet and outlet connections and determine external static pressure as described in ASHRAE 37–2009 (incorporated by reference; see § 431.303), Sections 6.4 and 6.5. Use pressure measurement instrumentation as described in ASHRAE 37–2009, Section 5.3.2. Test at the fan speed specified in manufacturer installation instructions—if there is more than one fan speed setting and the installation instructions do not specify which speed to use, test at the highest speed. Conduct tests with the external static pressure equal to 50 percent of the maximum external static pressure allowed by the manufacturer for system installation within a tolerance of $-0.00/+0.05$ in. wc. Set the external static pressure by symmetrically restricting the outlet of the test duct. Alternatively, if using the indoor air enthalpy

method to measure capacity, set external static pressure by adjusting the fan of the airflow measurement apparatus. In case of conflict, these requirements for setting evaporator airflow take precedence over airflow values specified in manufacturer installation instructions or product literature.

3.3.3.2. *Unit Coolers or Single-Packaged Systems that are not High-Temperature Refrigeration Systems.*

Use appendix C, Section C10 of AHRI 1250–2009 for off-cycle evaporator fan testing, with the exception that evaporator fan controls using periodic stir cycles shall be adjusted so that the greater of a 50% duty cycle (rather than a 25% duty cycle) or the manufacturer default is used for measuring off-cycle fan energy. For adjustable-speed controls, the greater of 50% fan speed (rather than 25% fan speed) or the manufacturer's default fan speed shall be used for measuring off-cycle fan energy. Also, a two-speed or multi-speed fan control may be used as the qualifying evaporator fan control. For such a control, a fan speed no less than 50% of the speed used in the maximum capacity tests shall be used for measuring off-cycle fan energy.

3.3.3.3. *High-Temperature Refrigeration Systems.*

3.3.3.3.1. The evaporator fan power consumption shall be measured in accordance with the requirements in Section C3.5 of AHRI 1250–2009. This measurement shall be made with the fan operating at full speed, either measuring unit cooler or total system power input upon the completion of the steady state test when the compressor and the condenser fan of the walk-in system are turned off, or by submetered measurement of the evaporator fan power during the steady state test.

Section C3.5 of AHRI 1250–2009 is revised to read:

Evaporator Fan Power Measurement.

The following shall be measured and recorded during a fan power test.

EF_{comp,on} Total electrical power input to fan motor(s) of Unit Cooler, W
 FS Fan speed(s), rpm
 N Number of motors
 P_b Barometric pressure, in. Hg
 T_{db} Dry-bulb temperature of air at inlet, °F

T_{wb} Wet-bulb temperature of air at inlet, °F
 V Voltage of each phase

For a given motor winding configuration, the total power input shall be measured at the highest nameplate voltage. For three-phase power, voltage imbalance shall be no more than 2%.

3.3.3.3.2. Evaporator fan power for the off-cycle is equal to the on-cycle evaporator fan power with a run time of ten percent of the off-cycle time.

$$EF_{comp,off} = 0.1 \times EF_{comp,on}$$

* * * * *

3.3.7. Calculations for Unit Coolers Tested Alone.

3.3.7.1. Unit Coolers that are not High-Temperature Unit Coolers.

Calculate the AWEF and net capacity using the calculations in AHRI 1250–2009, Section 7.9.

3.3.7.2. High-Temperature Unit Coolers.

Calculate AWEF on the basis that walk-in box load is equal to half of the system net capacity, without variation according to high and low load periods, and with EER set according to tested evaporator capacity, as follows:

The net capacity, $\dot{q}_{mix,evap}$, is determined from the test data for the unit cooler at the 38 °F suction dewpoint.

$$\dot{B}L = 0.5 \times \dot{q}_{mix,evap}$$

$$\dot{E}_{mix,rack} = \frac{(\dot{q}_{mix,evap} + 3.412 \times \dot{E}F_{comp,on})}{EER} + \dot{E}F_{comp,on}$$

Where:

$$EER = \begin{cases} 11 & \text{if } \dot{q}_{mix,evap} < 10,000 \text{ Btu/h} \\ 0.0007 \times \dot{q}_{mix,evap} + 4 & \text{if } 10,000 \leq \dot{q}_{mix,evap} < 20,000 \text{ Btu/h} \\ 18 & \text{if } 20,000 \leq \dot{q}_{mix,evap} < 36,000 \text{ Btu/h} \end{cases}$$

$$LF = \frac{\dot{B}L + 3.412 \times \dot{E}F_{comp,off}}{\dot{q}_{mix,evap} + 3.412 \times \dot{E}F_{comp,off}}$$

$$AWEF = \frac{\dot{B}L}{\dot{E}_{mix,rack} \times LF + \dot{E}F_{comp,off} \times (1 - LF)}$$

Where:

$\dot{B}L$ is the non-equipment-related box load;

LF is the load factor; and

Other symbols are as defined in Section 8 of AHRI 1250–2009.

3.3.7.3. If the unit cooler has variable-speed evaporator fans that vary fan speed in response to load, then:

3.3.7.3.1. When testing to certify compliance with the energy conservation standards in § 431.306, fans shall operate at full speed during on-cycle operation. Do not conduct the calculations in AHRI 1250–2009, Section 7.9.3. Instead, use AHRI 1250–2009, Section 7.9.2 to determine the system's AWEF.

3.3.7.3.2. When calculating the benefit for the inclusion of variable-speed evaporator fans that modulate fan speed in response to load for the purpose of making representations of efficiency, use AHRI 1250–

2009, Section 7.9.3 to determine the system A WEF.

3.4. * * *

3.4.2. * * *

3.4.2.1. For calculating enthalpy leaving the unit cooler to calculate gross capacity, (a) the saturated refrigerant temperature (dew point) at the unit cooler coil exit, T_{evap} , shall be 25 °F for medium-temperature systems (coolers) and –20 °F for low-temperature systems (freezers), and (b) the refrigerant temperature at the unit cooler exit shall be 35 °F for medium-temperature systems (coolers) and –14 °F for low-temperature systems (freezers). For calculating gross capacity, the measured enthalpy at the condensing unit exit shall be used as the enthalpy entering the unit cooler. The temperature measurement requirements of appendix C, Section C3.1.6 of AHRI 1250–2009 and modified by section 3.2.1 of this appendix shall apply only to the condensing

unit exit rather than to the unit cooler inlet and outlet, and they shall be applied for two measurements when using the DX Dual Instrumentation test method.

* * * * *

■ 13. Add appendix C1 to subpart R of part 431 to read as follows:

Appendix C1 to Subpart R of Part 431—Uniform Test Method for the Measurement of Net Capacity and AWEF of Walk-In Cooler and Walk-In Freezer Refrigeration Systems

Note: Prior to [date 180 days after publication of final rule], representations with respect to the energy use of refrigeration components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with the applicable provisions for 10 CFR part 431, subpart R, appendix C,

revised as of January 1, 2022. Beginning [date 180 days after publication of final rule], representations with respect to energy use of refrigeration components of walk-in coolers and walk-in freezers, including compliance certifications, must be based on testing conducted in accordance with appendix C of this subpart.

For any amended standards for walk-in coolers and walk-in freezers published after January 1, 2022, manufacturers must use the results of testing under this appendix to determine compliance. Representations related to energy consumption must be made in accordance with this appendix when determining compliance with the relevant standard. Manufacturers may also use this appendix to certify compliance with any amended standards prior to the applicable compliance date for those standards.

1. Incorporation by Reference

DOE incorporated by reference in § 431.303, the entire standards for AHRI 1250–2020, ANSI/ASHRAE 16, and ANSI/ASHRAE 37. However, certain enumerated provisions of these standards, as set forth in sections 1.1, 1.2, and 1.3 of this appendix are inapplicable. To the extent there is a conflict between the terms or provisions of a referenced industry standard and the CFR, the CFR provisions control. To the extent there is a conflict between the terms or provisions of AHRI 1250–2020, ANSI/ASHRAE 16, and ANSI/ASHRAE 37, the AHRI 1250–2020 provisions control.

1.1 AHRI 1250–2020

1.1.1 Section 1 Purpose, is inapplicable as specified in section 4.1.1 of this appendix.

1.1.2 Section 2 Scope, is inapplicable as specified in section 4.1.2 of this appendix.

1.1.3 Section 9 Minimum Data Requirements for Published Rating, is inapplicable as specified in section 4.1.3 of this appendix.

1.1.4 Section 10 Marking and Nameplate Data, is inapplicable as specified in section 4.1.4 of this appendix.

1.1.5 Section 11 Conformance Conditions, is inapplicable as specified in section 4.1.5 of this appendix.

1.2 ANSI/ASHRAE 16

1.2.1 Section 1 Purpose, is inapplicable as specified in section 4.2.1 of this appendix.

1.2.2 Section 2 Scope, is inapplicable as specified in section 4.2.2 of this appendix.

1.2.3 Section 4 Classifications, is inapplicable as specified in section 4.2.3 of this appendix.

1.2.4 Normative Appendices E–M, are inapplicable as specified in section 4.2.4 of this appendix.

1.2.5 Informative Appendices N–R, are inapplicable as specified in section 4.2.5 of this appendix.

1.3 ANSI/ASHRAE 37

1.3.1 Section 1 Purpose, is inapplicable as specified in section 4.3.1 of this appendix.

1.3.2 Section 2 Scope, is inapplicable as specified in section 4.3.2 of this appendix.

1.3.3 Section 4 Classifications, is inapplicable as specified in section 4.3.3 of this appendix.

1.3.4 Informative Appendix A Classifications of Unitary Air-conditioners

and Heat Pumps, is inapplicable as specified in section 4.3.4 of this appendix.

2. Scope.

This appendix covers the test requirements used to determine the net capacity and the AWEF of the refrigeration system of a walk-in cooler or walk-in freezer.

3. Definitions.

3.1. Applicable Definitions.

The definitions contained in § 431.302, AHRI 1250–2020, ANSI/ASHRAE 37, and ANSI/ASHRAE 16 apply to this appendix. When definitions in standards incorporated by reference are in conflict or when they conflict with this section, the hierarchy of precedence shall be in the following order: § 431.302, AHRI 1250–2020, and then either ANSI/ASHRAE 37 or ANSI/ASHRAE 16.

The term “unit cooler” used in AHRI 1250–2020 and this subpart shall be considered to address both “unit coolers” and “ducted fan-coil units,” as appropriate.

3.2. Additional Definitions.

3.2.1. *Digital Compressor* means a compressor that uses mechanical means for disengaging active compression on a cyclic basis to provide a reduced average refrigerant flow rate in response to a control system input signal.

3.2.2. *Displacement Ratio*, applicable to staged positive displacement compressor systems, means the swept volume rate, *e.g.*, in cubic centimeters per second, of a given stage, divided by the swept volume rate at full capacity.

3.2.3. *Duty Cycle*, applicable to digital compressors, means the fraction of time that the compressor is engaged and actively compressing refrigerant.

3.2.4. *Maximum Speed*, applicable to variable-speed compressors, means the maximum speed at which the compressor will operate under the control of the dedicated condensing system control system for extended periods of time, *i.e.*, not including short-duration boost-mode operation.

3.2.5. *Minimum Speed*, applicable to variable-speed compressors, means the minimum compressor speed at which the compressor will operate under the control of the dedicated condensing system control system.

3.2.6. *Multiple-Capacity*, applicable for describing a refrigeration system, indicates that it has three or more stages (levels) of capacity.

3.2.7. *Speed Ratio*, applicable to variable-speed compressors, means the ratio of operating speed to the maximum speed.

4. Test Methods, Measurements, and Calculations.

Determine the Annual Walk-in Energy Factor (AWEF) and net capacity of walk-in cooler and walk-in freezer refrigeration systems by conducting the test procedure set forth in AHRI 1250–2020, with the modifications to that test procedure provided in this section. However, certain sections of AHRI 1250–2020, ANSI/ASHRAE 37, and ANSI/ASHRAE 16 are not applicable, as set forth in sections 4.1, 4.2, and 4.3 of this appendix. Round AWEF measurements to the nearest 0.05 Btu/Wh. Round net capacity measurements as indicated in Table 1 of this appendix.

TABLE 1—ROUNDING OF REFRIGERATION SYSTEM NET CAPACITY

Net capacity range, Btu/h	Rounding multiple, Btu/h
<20,000	100
≥20,000 and <38,000	200
≥38,000 and <65,000	500
≥65,000	1,000

The following sections of this appendix provide additional instructions for testing. In cases where there is a conflict, the language of this appendix takes highest precedence, followed by AHRI 1250–2020, then ANSI/ASHRAE 37 or ANSI/ASHRAE 16. Any subsequent amendment to a referenced document by the standard-setting organization will not affect the test procedure in this appendix, unless and until the test procedure is amended by DOE. Material is incorporated as it exists on the date of the approval, and a notice of any change in the incorporation will be published in the **Federal Register**.

4.1 Excepted sections of AHRI 1250–2020.

- (a) Section 1 Purpose,
- (b) Section 2 Scope,
- (c) Section 9 Minimum Data Requirements for Published Ratings,
- (d) Section 10 Marking and Nameplate Data, and
- (e) Section 11 Conformance Conditions.

4.2 Excepted sections of ANSI/ASHRAE 16.

- (a) Section 1 Purpose,
- (b) Section 2 Scope,
- (c) Section 4 Classifications,
- (d) Normative Appendices E–M,
- (e) Informative Appendices N–R.

4.3 Excepted sections of ANSI/ASHRAE 37.

- (a) Section 1 Purpose,
- (b) Section 2 Scope,
- (c) Section 4 Classifications,
- (d) Informative Appendix A Classifications of Unitary Air-conditioners and Heat Pumps.

4.4 Instrumentation Accuracy and Test Tolerances.

Use measuring instruments as described in Section 4.1 of AHRI 1250–2020, with the following additional requirement.

4.4.1. Electrical Energy Input measured in Wh with a minimum accuracy of ±0.5% of reading (for Off-Cycle tests per footnote 5 of Table C3 in Section C3.6.2 of AHRI 1250–2020).

4.5. Test Operating Conditions.

Test conditions used to determine AWEF shall be as specified in Tables 4 through 17 of AHRI 1250–2020. Tables 7 and 11 of AHRI 1250–2020, labeled to apply to variable-speed outdoor matched-pair refrigeration systems, shall also be used for testing variable-capacity single-packaged outdoor refrigeration systems, and also for testing multiple-capacity matched-pair or single-packaged outdoor refrigeration systems. Test conditions used to determine AWEF for refrigeration systems not specifically identified in AHRI 1250–2020 are as enumerated in sections 4.5.1 through 4.5.6 of this appendix.

4.5.1 Test Operating Conditions for High-Temperature Refrigeration Systems.

For fixed-capacity high-temperature matched-pair or single-packaged refrigeration systems with indoor condensing units,

conduct tests using the test conditions specified in Table 2 of this appendix. For fixed-capacity high-temperature matched-pair or single-packaged refrigeration systems with outdoor condensing units, conduct tests

using the test conditions specified in Table 3 of this appendix. For high-temperature unit coolers tested alone, conduct tests using the test conditions specified in Table 4 of this appendix.

TABLE 2—TEST OPERATING CONDITIONS FOR FIXED-CAPACITY HIGH-TEMPERATURE INDOOR MATCHED PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, % ¹	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F	Compressor status	Test objective
Off-Cycle Power	55	55	.....	.....	Compressor Off	Measure total input wattage during compressor off cycle, ($\dot{E}_{cu,off} + \dot{E}_{comp,off}$) ² .
Refrigeration Capacity A	55	55	90	75, ³ 65 ⁴	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler, input power, and EER at Test Condition.

Notes:

¹ The test condition tolerance (maximum permissible variation of the average value of the measurement from the specified test condition) for relative humidity is 3%.

² Measure off-cycle power as described in Sections C3 and C4.2 of AHRI 1250–2020.

³ Required only for evaporative condensing units (e.g., incorporates a slinger ring).

⁴ Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

TABLE 3—TEST OPERATING CONDITIONS FOR FIXED-CAPACITY HIGH-TEMPERATURE OUTDOOR MATCHED-PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, % ¹	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F	Compressor status	Test objective
Refrigeration Capacity A	55	55	95	75, ³ 68 ⁴	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler, input power, and EER at Test Condition.
Off-Cycle Power, Capacity A	55	55	95	75, ³ 68 ⁴	Compressor Off	Measure total input wattage during compressor off cycle, ($\dot{E}_{cu,off} + \dot{E}_{comp,off}$) ² .
Refrigeration Capacity B	55	55	59	54, ³ 46 ⁴	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler and system input power at moderate condition.
Off-Cycle Power, Capacity B	55	55	59	54, ³ 46 ⁴	Compressor Off	Measure total input wattage during compressor off cycle, ($\dot{E}_{cu,off} + \dot{E}_{comp,off}$) ² .
Refrigeration Capacity C	55	55	35	34, ³ 29 ⁴	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler and system input power at cold condition.
Off-Cycle Power, Capacity C	55	55	35	34, ³ 29 ⁴	Compressor Off	Measure total input wattage during compressor off cycle, ($\dot{E}_{cu,off} + \dot{E}_{comp,off}$) ² .

Notes:

¹ The test condition tolerance (maximum permissible variation of the average value of the measurement from the specified test condition) for relative humidity is 3%.

² Measure off-cycle power as described in Sections C3 and C4.2 of AHRI 1250–2020.

³ Required only for evaporative condensing units (e.g., incorporates a slinger ring).

⁴ Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

TABLE 4—TEST OPERATING CONDITIONS FOR HIGH-TEMPERATURE UNIT COOLERS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, % ¹	Suction dew point temp, °F ^{3,4}	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor status	Test objective
Off-Cycle	55	55	.....	105	9	Compressor Off	Measure unit cooler input wattage during compressor off cycle, $\dot{E}_{comp,off}$ ² .
Refrigeration Capacity	55	55	38	105	9	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler, input power, and EER at Test Condition.

Notes:

¹ The test condition tolerance (maximum permissible variation of the average value of the measurement from the specified test condition) for relative humidity is 3%.

² Measure off-cycle power as described in Sections C3 and C4.2 of AHRI 1250–2020.

³ Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.

⁴ Suction Dew Point shall be measured at the Unit Cooler Exit.

4.5.2 Test Operating Conditions for CO₂ Unit Coolers.

For medium-temperature CO₂ Unit Coolers, conduct tests using the test conditions specified in Table 5 of this appendix. For

low-temperature CO₂ Unit Coolers, conduct tests using the test conditions specified in Table 6 of this appendix.

TABLE 5—TEST OPERATING CONDITIONS FOR MEDIUM-TEMPERATURE CO₂ UNIT COOLERS ¹

Test title	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Suction dew point temp, ³ °F	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor operating mode	Test objective
Off-Cycle Power	35	<50	.....	.....	.....	Compressor On	Measure unit cooler input wattage during compressor off cycle, <i>E_{Comp,off}</i> . ²
Refrigeration Capacity, Ambient Condition A.	35	<50	25	38	5	Compressor Off	Determine Net Refrigeration Capacity of Unit Cooler, <i>q_{mix,rack}</i> .

Notes:¹ Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.² Measure off-cycle power as described in Sections C3 and C4.2 of AHRI 1250–2020.³ Suction Dew Point shall be measured at the Unit Cooler Exit conditions.TABLE 6—TEST OPERATING CONDITIONS FOR LOW-TEMPERATURE CO₂ UNIT COOLERS ¹

Test Title	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Suction dew point temp, ³ °F	Liquid inlet bubble point temperature, °F	Liquid inlet subcooling, °F	Compressor operating mode	Test objective
Off-Cycle Power	– 10	<50	.....	.....	.....	Compressor Off	Measure unit cooler input wattage during compressor off cycle, <i>E_{Comp,off}</i> . ²
Refrigeration Capacity, Ambient Condition A.	– 10	<50	– 20	38	5	Compressor On	Determine Net Refrigeration Capacity of Unit Cooler, <i>q_{mix,rack}</i> .
Defrost	– 10	<50	.....	.....	.....	Compressor Off	Test according to Appendix C Section C10 of AHRI 1250–2020, <i>DF,QDF</i> .

Notes:¹ Superheat shall be set as indicated in the installation instructions. If no superheat specification is given a default superheat value of 6.5 °F shall be used.² Measure off-cycle power as described in Sections C3 and C4.2 of AHRI 1250–2020.³ Suction Dew Point shall be measured at the Unit Cooler Exit conditions.

4.5.3 Test Operating Conditions for Two-Capacity Condensing Units Tested Alone.

For two-capacity medium-temperature outdoor condensing units tested alone, conduct tests using the test conditions specified in Table 7 of this appendix. For

two-capacity medium-temperature indoor condensing units tested alone, conduct tests using the test conditions specified in Table 8 of this appendix. For two-capacity low-temperature outdoor condensing units tested alone, conduct tests using the test conditions

specified in Table 9 of this appendix. For two-capacity low-temperature indoor condensing units tested alone, conduct tests using the test conditions specified in Table 10 of this appendix.

TABLE 7—TEST OPERATING CONDITIONS FOR TWO-CAPACITY MEDIUM-TEMPERATURE OUTDOOR DEDICATED CONDENSING UNITS

Test description	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor status
Capacity, Condition A, Low Capacity.	Unit Cooler Low Fan: ² 24.5	49	95	75	Low Capacity, k=1.
Capacity, Condition A, High Capacity.	Unit Cooler High Fan: ² 25.5	46			
Off Cycle, Condition A	23	41	95	75	High Capacity, k=2.
Capacity, Condition B, Low Capacity.	Unit Cooler Low Fan: ² 24.5	47	59	54	Off.
Capacity, Condition B, High Capacity.	Unit Cooler High Fan: ² 25.5	45			Low Capacity, k=1.
Off Cycle, Condition B	23		59	54	High Capacity, k=2.
Capacity, Condition C, Low Capacity.	Unit Cooler Low Fan: ² 22.5	41	35	34	Off.
Capacity, Condition C, High Capacity.	Unit Cooler High Fan: ² 25.5	41			Low Capacity, k=1.
Off Cycle, Condition C	23	41	35	34	High Capacity, k=2.
			35	34	Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When Staged compressor displacement ratio for low capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 8—TEST OPERATING CONDITIONS FOR TWO-CAPACITY MEDIUM-TEMPERATURE INDOOR DEDICATED CONDENSING UNITS

Test description	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor status
Capacity, Condition A, Low Capacity.	Unit Cooler Low Fan: ² 24.5	49	90	75	Low Capacity, k=1.
Capacity, Condition A, High Capacity.	Unit Cooler High Fan: ² 25.5	46			
Off Cycle, Condition A	23	41	90	75	High Capacity, k=2.
	.....	.....	90	75	Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When staged compressor displacement ratio for low capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 9—TEST OPERATING CONDITIONS FOR TWO-CAPACITY LOW-TEMPERATURE OUTDOOR DEDICATED CONDENSING UNITS

Test title	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor operating mode
Capacity, Condition A, Low Capacity.	Unit Cooler Low Fan: ² -20.5	21	95	75	Low Capacity, k=1.
Capacity, Condition A, High Capacity.	Unit Cooler High Fan: ² -19.5	13			
Off Cycle, Condition A	-22	5	95	75	High Capacity, k=2.
Capacity, Condition B, Low Capacity.	.....		95	75	Compressor Off.
Capacity, Condition B, High Capacity.	Unit Cooler Low Fan: ² -20.5	19	59	54	Low Capacity, k=1.
Off Cycle, Condition B	Unit Cooler High Fan: ² -19.5	13			
Capacity, Condition C, Low Capacity.	-22	5	59	54	High Capacity, k=2.
Capacity, Condition C, High Capacity.	.....		59	54	Compressor Off.
Off Cycle, Condition C	Unit Cooler Low Fan: ² -20.5	17	35	34	Low Capacity, k=1.
	Unit Cooler High Fan: ² -19.5	12			
	-22	5	35	34	Maximum Capacity, k=2.
	.....		35	34	Compressor Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When staged compressor displacement ratio for low capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 10—TEST OPERATING CONDITIONS FOR TWO-CAPACITY LOW-TEMPERATURE INDOOR DEDICATED CONDENSING UNITS

Test title	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor operating mode
Capacity, Condition A, Low Capacity.	Unit Cooler Low Fan: ² -20.5	21	90	75	Low Capacity, k=1.
Capacity, Condition A, High Capacity.	Unit Cooler High Fan: ² -19.5	13			
Off Cycle, Condition A	-22	5	90	75	High Capacity, k=2.
	.....	.....	90	75	Compressor Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When staged compressor displacement ratio for low capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

4.5.4 Test Operating Conditions for Variable- or Multiple-Capacity Condensing Units Tested Alone.

For variable-capacity or multiple-capacity outdoor medium-temperature condensing units tested alone, conduct tests using the test conditions specified in Table 11 of this

appendix. For variable-capacity or multiple-capacity indoor medium-temperature condensing units tested alone, conduct tests using the test conditions specified in Table 12 of this appendix. For variable-capacity or multiple-capacity outdoor low-temperature condensing units tested alone, conduct tests

using the test conditions specified in Table 13 of this appendix. For variable-capacity or multiple-capacity indoor low-temperature condensing units tested alone, conduct tests using the test conditions specified in Table 14 of this appendix.

TABLE 11—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY MEDIUM-TEMPERATURE OUTDOOR DEDICATED CONDENSING UNITS

Test description	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor status
Capacity, Condition A, Minimum Capacity.	26	56	95	75	Minimum Capacity, k=1.
Capacity, Condition A, Intermediate Capacity.	Unit Cooler Low Fan: ² 22.5 Unit Cooler High Fan: ² 25.5	44 46	95	75	Intermediate Capacity, k=i.
Capacity, Condition A, Maximum Capacity.	23	41	95	75	Maximum Capacity, k=2.
Off Cycle, Condition A .....	.....	.....	95	75	Off.
Capacity, Condition B, Minimum Capacity.	26	51	59	54	Minimum Capacity, k=1.
Capacity, Condition B, Intermediate Capacity.	Unit Cooler Low Fan: ² 22.5 Unit Cooler High Fan: ² 25.5	44 45	59	54	Intermediate Capacity, k=i.
Capacity, Condition B, Maximum Capacity.	23	41	59	54	Maximum Capacity, k=2.
Off Cycle, Condition B .....	.....	.....	59	54	Off.
Capacity, Condition C, Minimum Capacity.	26	41	35	34	Minimum Capacity, k=1.
Capacity, Condition C, Intermediate Capacity.	Unit Cooler Low Fan: ² 22.5 Unit Cooler High Fan: ² 25.5	41 41	35	34	Intermediate Capacity, k=i.
Capacity, Condition C, Maximum Capacity.	23	41	35	34	Maximum Capacity, k=2.
Off Cycle, Condition C .....	.....	.....	35	34	Off

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When Digital Compressor duty cycle, variable-speed speed ratio, or staged compressor displacement ratio for intermediate capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 12—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY MEDIUM-TEMPERATURE INDOOR DEDICATED CONDENSING UNITS

Test description	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor status
Capacity, Condition A, Minimum Capacity.	26	56	90	75	Minimum Capacity, k=1.
Capacity, Condition A, Intermediate Capacity.	Unit Cooler Low Fan: ² 22.5 Unit Cooler High Fan: ² 25.5	44 46	90	75	Intermediate Capacity, k=i.
Capacity, Condition A, Maximum Capacity.	23	41	90	75	Maximum Capacity, k=2.
Off Cycle, Condition A .....	.....	.....	90	75	Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When Digital Compressor duty cycle, variable-speed speed ratio, or staged compressor displacement ratio for intermediate capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 13—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY LOW-TEMPERATURE OUTDOOR DEDICATED CONDENSING UNITS

Test title	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor operating mode
Capacity, Condition A, Minimum Capacity.	− 19	32	95	75	Minimum Capacity, k=1.
Capacity, Condition A, Intermediate Capacity.	Unit Cooler Low Fan: ² − 22.5 Unit Cooler High Fan: ² − 19.5	13 13	95	75	Minimum Capacity, k=i.
Capacity, Condition A, Maximum Capacity.	− 22	5	95	75	Maximum Capacity, k=2.
Off Cycle, Condition A .....	.....	.....	95	75	Compressor Off.

TABLE 13—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY LOW-TEMPERATURE OUTDOOR DEDICATED CONDENSING UNITS—Continued

Test title	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor operating mode
Capacity, Condition B, Minimum Capacity.	– 19	28	59	54	Minimum Capacity, k=1.
Capacity, Condition B, Intermediate Capacity.	Unit Cooler Low Fan: ² – 22.5 Unit Cooler High Fan: ² – 19.5	12 13	59	54	Minimum Capacity, k=i.
Capacity, Condition B, Maximum Capacity.	– 22	5	59	54	Maximum Capacity, k=2.
Off Cycle, Condition B .....	.....	.....	59	54	Compressor Off.
Capacity, Condition C, Minimum Capacity.	– 19	23	35	34	Minimum Capacity, k=1.
Capacity, Condition C, Intermediate Capacity.	Unit Cooler Low Fan: ² – 22.5 Unit Cooler High Fan: ² – 19.5	11 12	35	34	Minimum Capacity, k=i.
Capacity, Condition C, Maximum Capacity.	– 22	5	35	34	Maximum Capacity, k=2.
Off Cycle, Condition C .....	.....	.....	35	34	Compressor Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When Digital Compressor duty cycle, variable-speed speed ratio, or staged compressor displacement ratio for intermediate capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

TABLE 14—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY LOW-TEMPERATURE INDOOR DEDICATED CONDENSING UNITS

Test title	Suction dew point, °F	Return gas, °F	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F ¹	Compressor operating mode
Capacity, Condition A, Minimum Capacity.	– 19	32	90	75	Minimum Capacity, k=1.
Capacity, Condition A, Intermediate Capacity.	Unit Cooler Low Fan: ² – 22.5 Unit Cooler High Fan: ² – 19.5	13 13	90	75	Minimum Capacity, k=i.
Capacity, Condition A, Maximum Capacity.	– 22	5	90	75	Maximum Capacity, k=2.
Off Cycle, Condition A .....	.....	.....	90	75	Compressor Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² When Digital Compressor duty cycle, variable-speed speed ratio, or staged compressor displacement ratio for intermediate capacity is 65% or less, use the Unit Cooler Low Fan condition, otherwise use the Unit cooler High Fan condition.

4.5.5 Test Operating Conditions for Two-Capacity Indoor Matched-Pair or Single-Packaged Refrigeration Systems.

For two-capacity indoor medium-temperature matched-pair or single-packaged

refrigeration systems, conduct tests using the test conditions specified in Table 15 of this appendix. For two-capacity indoor low-temperature matched-pair or single-packaged refrigeration systems, conduct tests using the

test conditions specified in Table 16 of this appendix.

TABLE 15—TEST OPERATING CONDITIONS FOR TWO-CAPACITY MEDIUM-TEMPERATURE INDOOR MATCHED-PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F	Compressor status
Capacity, Condition A, Low Capacity	35	<50	90	75, ¹ 65 ²	Low Capacity.
Capacity, Condition A, High Capacity	35	<50	90	75, ¹ 65 ²	High Capacity.
Off Cycle,	35	<50	90	75, ¹ 65 ²	Off.
Condition A .....	.....	.....	.....	.....	.....

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

TABLE 16—TEST OPERATING CONDITIONS FOR TWO CAPACITY LOW-TEMPERATURE INDOOR MATCHED-PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Condenser air entering dry-bulb, °F	Maximum condenser air entering wet-bulb, °F	Compressor status
Capacity, Condition A, Low Capacity	– 10	<50	90	75, ¹ 65 ²	Low Capacity.
Capacity, Condition A, High Capacity	– 10	<50	90	75, ¹ 65 ²	High Capacity.
Off Cycle, Condition A	– 10	<50	90	75, ¹ 65 ²	Off.
Defrost	– 10	<50	.....	.....	System Dependent.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

4.5.6 Test Conditions for Variable- or Multiple-Capacity Indoor Matched Pair or Single-Packaged Refrigeration Systems.

For variable- or multiple-capacity indoor medium-temperature matched-pair or single-

packaged refrigeration systems, conduct tests using the test conditions specified in Table 17 of this appendix. For variable- or multiple-capacity indoor low-temperature matched-pair or single-packaged refrigeration

systems, conduct tests using the test conditions specified in Table 18 of this appendix.

TABLE 17—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY MEDIUM-TEMPERATURE INDOOR MATCHED-PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Condenser air entering dry-bulb, °F	Condenser air entering wet-bulb, °F	Compressor status
Capacity, Condition A, Minimum Capacity	35	<50	90	75, ¹ 65 ²	Minimum Capacity.
Capacity, Condition A, Intermediate Capacity	35	<50	90	75, ¹ 65 ²	Intermediate Capacity.
Capacity, Condition A, High Capacity	35	<50	90	75, ¹ 65 ²	Maximum Capacity.
Off Cycle, Condition A	35	<50	90	75, ¹ 65 ²	Off.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

TABLE 18—TEST OPERATING CONDITIONS FOR VARIABLE- OR MULTIPLE-CAPACITY LOW-TEMPERATURE INDOOR MATCHED-PAIR OR SINGLE-PACKAGED REFRIGERATION SYSTEMS

Test description	Unit cooler air entering dry-bulb, °F	Unit cooler air entering relative humidity, %	Condenser air entering dry-bulb, °F	Maximum condenser air entering wet-bulb, °F	Compressor status
Capacity, Condition A, Minimum Capacity	– 10	<50	90	75, ¹ 65 ²	Minimum Capacity.
Capacity, Condition A, Intermediate Capacity	– 10	<50	90	75, ¹ 65 ²	Intermediate Capacity.
Capacity, Condition A, Maximum Capacity	– 10	<50	90	75, ¹ 65 ²	Maximum Capacity.
Off Cycle, Condition A	– 10	<50	90	75, ¹ 65 ²	Off.
Defrost	– 10	<50	.....	.....	System Dependent.

Notes:¹ Required only for evaporative condensing units (e.g., incorporates a slinger ring).² Maximum allowable value for Single-Packaged Systems that do not use evaporative Dedicated Condensing Units, where all or part of the equipment is located in the outdoor room.

4.6. Calculation for Walk-in Box Load.

4.6.1 For medium- and low-temperature refrigeration systems with indoor condensing units, calculate walk-in box loads for high and low load periods as a function of net capacity as described in Section 6.2.1 of AHRI 1250–2020.

4.6.2 For medium- and low-temperature refrigeration systems with outdoor condensing units, calculate walk-in box loads for high and low load periods as a function of net capacity and outdoor temperature as described in Section 6.2.2 of AHRI 1250–2020.

4.6.3 For high-temperature refrigeration systems, calculate walk-in box load as follows.

$$\dot{B}L = \dot{q}_{ss,A}$$

Where $\dot{q}_{ss,A}$ is the measured net capacity for Test Condition A.

4.7. Calculation for Annual Walk-in Energy Factor (AWEF).

Calculations used to determine AWEF based on performance data obtained for

testing shall be as specified in Section 7 of AHRI 1250–2020 with modifications as indicated in sections 4.7.7 through 4.7.10 of this appendix. Calculations used to determine AWEF for refrigeration systems not specifically identified in Sections 7.1.1 through 7.1.6 of AHRI 1250–2020 are enumerated in sections 4.7.1 through 4.7.6 and sections 4.7.11 through 4.7.14 of this appendix.

4.7.1 Two-Capacity Condensing Units Tested Alone, Indoor.

4.7.1.1 Unit Cooler Power.

Calculate maximum-capacity unit cooler power during the compressor on period $\dot{E}F_{comp,on}$, in Watts, using Equation 130 of AHRI 1250–2020 for medium-temperature refrigeration systems and using Equation 173 of AHRI 1250–2020 for low-temperature refrigeration systems.

Calculate unit cooler power during the compressor off period $\dot{E}F_{comp,off}$, in Watts, as 20 percent of the maximum-capacity unit cooler power during the compressor on period.

4.7.1.2 Defrost.

For freezer refrigeration systems, calculate defrost heat contribution \dot{Q}_{DF} in Btu/h and the defrost average power consumption $\dot{D}F$ in W as a function of steady-state maximum gross refrigeration capacity \dot{Q} , as specified in Section C10.2.2 of Appendix C of AHRI 1250–2020.

4.7.1.3 Net Capacity.

Calculate steady-state maximum net capacity, \dot{q} , and minimum net capacity, \dot{q} as follows:

$$\dot{q} = \dot{Q} - 3.412 \cdot \dot{E}F_{comp,on}$$

$$\dot{q} = \dot{Q} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on}$$

Where:

\dot{Q} , and \dot{Q} , represent gross refrigeration capacity at maximum and minimum capacity, respectively.

4.7.1.4 Calculate average power input during the low load period as follows.

If the low load period box load, $\dot{B}L$, plus defrost heat contribution, \dot{Q}_{DF} (only applicable for freezers), is less than the minimum net capacity \dot{q} :

$$LFL^{k=1} = \frac{\dot{B}L + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1} + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1} + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1} + (\dot{E}F_{comp,off} + \dot{E}_{cu,off}) * (1 - LFL^{k=1})$$

Where:

\dot{E} is the steady state condensing unit power input for minimum-capacity operation.

$\dot{E}_{cu,off}$ is the condensing unit off-cycle power input, measured as described in Section C3.5 of AHRI 1250–2020.

If the low load period box load, $\dot{B}L$, plus defrost heat contribution, \dot{Q}_{DF} , (only applicable for freezers) is greater than the minimum net capacity \dot{q} :

$$LFL^{k=1} = \frac{\dot{q}_{ss}^{k=2} - (\dot{B}L + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=1}}$$

$$LFL^{k=2} = 1 - LFL^{k=1}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1} + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1} + (\dot{E}_{ss}^{k=2} + \dot{E}F_{comp,on}) * LFL^{k=2}$$

4.1.7.5 Calculate average power input during the high load period as follows.

$$LFH^{k=1} = \frac{\dot{q}_{ss}^{k=2} - (\dot{B}LH + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=1}}$$

$$LFH^{k=2} = 1 - LFH^{k=1}$$

$$\dot{E}_H = (\dot{E}_{ss}^{k=1} + 0.2 \cdot \dot{E}F_{comp,on}) * LFH^{k=1} + (\dot{E}_{ss}^{k=2} + \dot{E}F_{comp,on}) * LFH^{k=2}$$

4.1.7.6 Calculate the AWEF as follows:

$$AWEF = \frac{0.33 \cdot \dot{B}LH + 0.67 \cdot \dot{B}LL}{0.33 \cdot \dot{E}_H + 0.67 \cdot \dot{E}_L + \dot{D}F}$$

4.7.2 Variable-Capacity or Multistage Condensing Units Tested Alone, Indoor.

4.7.2.1 Unit Cooler Power.

Calculate maximum-capacity unit cooler power during the compressor on period $\dot{E}F_{comp,on}$ as described in section 4.7.1.1 of this appendix.

Calculate unit cooler power during the compressor off period $\dot{E}F_{comp,off}$, in Watts, as 20 percent of the maximum-capacity unit cooler power during the compressor on period.

4.7.2.2 Defrost.

Calculate Defrost parameters as described in section 4.7.1.2 of this appendix.

4.7.2.3 Net Capacity.

Calculate steady-state maximum net capacity, \dot{q} , intermediate net capacity, \dot{q} , and minimum net capacity, \dot{q} , as follows:

$$\dot{q} = \dot{Q} - 3.412 \cdot \dot{E}F_{comp,on}$$

$$\dot{q} = \dot{Q} - 3.412 \cdot K_f \dot{E}F_{comp,on}$$

$$\dot{q} = \dot{Q} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on}$$

Where:

\dot{Q} , \dot{Q} , \dot{Q} , and represent gross refrigeration capacity at maximum, intermediate, and minimum capacity, respectively.

K_f is the unit cooler power coefficient for intermediate capacity operation, set equal to

0.2 to represent low-speed fan operation if the Duty Cycle for a Digital Compressor, the Speed Ratio for a Variable-Speed Compressor, or the Displacement Ratio for a Multi-Stage Compressor at Intermediate Capacity is 65% or less, and otherwise set equal to 1.0.

4.7.2.4 Calculate average power input during the low load period as follows.

If the low load period box load, $\dot{B}LL$, plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the minimum net capacity:

$$LFL^{k=1} = \frac{\dot{B}LL + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1} + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1} + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1} + (\dot{E}F_{comp,off} + \dot{E}_{cu,off}) * (1 - LFL^{k=1})$$

Where $\dot{E}_{cu,off}$, in W, is the condensing unit off-mode power consumption, measured as described in Section C3.5 of AHRI 1250–2020.

If the low load period box load $\dot{B}LL$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is greater than the

minimum net capacity and less than the intermediate net capacity \dot{q} :

$$EER_L = EER^{k=1} + (EER^{k=i} - EER^{k=1}) \frac{(\dot{B}LL + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}}{\dot{q}_{ss}^{k=i} - \dot{q}_{ss}^{k=1}}$$

$$\dot{E}_L = \frac{\dot{B}LL}{EER_L}$$

Where:

$EER^{k=1}$ is the minimum-capacity energy efficiency ratio, equal to \dot{q} divided by $\dot{E} + \dot{E}F_{comp,on}$; and

$EER^{k=i}$ is the intermediate-capacity energy efficiency ratio, equal to \dot{q} divided by $\dot{E} + \dot{E}F_{comp,on}$.

4.7.2.5 Calculate average power input during the high load period as follows:

If the high load period box load, $\dot{B}LH$, plus defrost heat contribution, \dot{Q}_{DF} (only applicable for freezers), is greater than the minimum net capacity \dot{q} and less than the intermediate net capacity \dot{q} :

$$EER_H = EER^{k=1} + (EER^{k=i} - EER^{k=1}) \frac{(B\dot{L}H + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}}{\dot{q}_{ss}^{k=i} - \dot{q}_{ss}^{k=1}}$$

$$\dot{E}_H = \frac{B\dot{L}H}{EER_H}$$

If the high load period box load, $B\dot{L}H$, plus defrost heat contribution, \dot{Q}_{DF} (only applicable for freezers), is greater than the

intermediate net capacity \dot{q} and less than the maximum net capacity, \dot{q} :

$$EER_H = EER^{k=i} + (EER^{k=2} - EER^{k=i}) \frac{(B\dot{L}H + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=i}}$$

$$\dot{E}_H = \frac{B\dot{L}H}{EER_H}$$

Where:

$EER^{k=2}$ is the maximum-capacity energy efficiency ratio, equal to \dot{q} divided by $\dot{E} + \dot{E}_{comp,on}$

4.7.2.6 Calculate the AWEF as follows.

$$AWEF = \frac{0.33 \cdot B\dot{L}H + 0.67 \cdot B\dot{L}L}{0.33 \cdot \dot{E}_H + 0.67 \cdot \dot{E}_L + \dot{D}F}$$

4.7.3 Two-Capacity Condensing Units Tested Alone, Outdoor.

4.7.3.1 Unit Cooler Power.

Calculate maximum-capacity unit cooler power during the compressor on period $\dot{E}F_{comp,on}$, in Watts, using Equation 153 of AHRI 1250–2020 for medium-temperature refrigeration systems and using Equation 196

of AHRI 1250–2020 for low-temperature refrigeration systems.

Calculate unit cooler power during the compressor off period $\dot{E}F_{comp,off}$, in Watts, as 20 percent of the maximum-capacity unit cooler power during the compressor on period.

4.7.3.2 Defrost.

Calculate Defrost parameters as described in section 4.7.1.2.

4.7.3.3 Condensing Unit Off-Cycle Power. Calculate Condensing Unit Off-Cycle Power for temperature t_j as follows.

$$\dot{E}_{cu,off}(t_j) = \begin{cases} \dot{E}_{cu,off,A} & \text{if } t_j \geq 95^\circ\text{F} \\ \text{See note below} & \text{if } 35^\circ\text{F} < t_j < 95^\circ\text{F} \\ \dot{E}_{cu,off,C} & \text{if } t_j \leq 35^\circ\text{F} \end{cases}$$

Where $\dot{E}_{cu,off,A}$ and $\dot{E}_{cu,off,C}$ are the Condensing Unit off-cycle power measurements for test conditions A and C, respectively, measured as described in Section C3.5 of AHRI 1250–2020. If t_j is greater than 35 °F and less than 59 °F, use

Equation 157 of AHRI 1250–2020, and if t_j is greater than or equal to 59 °F and less than 95 °F, use Equation 159.

4.7.3.4 Net Capacity and Condensing Unit Power Input.

Calculate steady-state maximum net capacity, $\dot{q}(t_j)$, and minimum net capacity, $\dot{q}(t_j)$, and corresponding condensing unit power input levels $\dot{E}(t_j)$ and $\dot{E}(t_j)$ as a function of outdoor temperature t_j as follows:

If $35\text{ }^{\circ}\text{F} < t_j \leq 59\text{ }^{\circ}\text{F}$:

$$\begin{aligned}\dot{q}_{ss}^{k=2}(t_j) &= \dot{Q}_{gross,C}^{k=2} + (\dot{Q}_{gross,B}^{k=2} - \dot{Q}_{gross,C}^{k=2}) \frac{t_j - 35}{59 - 35} - 3.412 \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=1}(t_j) &= \dot{Q}_{gross,C}^{k=1} + (\dot{Q}_{gross,B}^{k=1} - \dot{Q}_{gross,C}^{k=1}) \frac{t_j - 35}{59 - 35} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on} \\ \dot{E}_{ss}(t_j) &= \dot{E}_{ss,C}^k + (\dot{E}_{ss,B}^k - \dot{E}_{ss,C}^k) \frac{t_j - 35}{59 - 35}\end{aligned}$$

If $59\text{ }^{\circ}\text{F} \geq t_j > 95\text{ }^{\circ}\text{F}$:

$$\begin{aligned}\dot{q}_{ss}^{k=2}(t_j) &= \dot{Q}_{gross,B}^{k=2} + (\dot{Q}_{gross,A}^{k=2} - \dot{Q}_{gross,B}^{k=2}) \frac{t_j - 59}{95 - 59} - 3.412 \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=1}(t_j) &= \dot{Q}_{gross,B}^{k=1} + (\dot{Q}_{gross,A}^{k=1} - \dot{Q}_{gross,B}^{k=1}) \frac{t_j - 59}{95 - 59} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on} \\ \dot{E}_{ss}(t_j) &= \dot{E}_{ss,B}^k + (\dot{E}_{ss,A}^k - \dot{E}_{ss,B}^k) \frac{t_j - 59}{95 - 59}\end{aligned}$$

Where:

The capacity level k can equal 1 or 2;
Q and Q represent gross refrigeration capacity at maximum and minimum capacity, respectively, for test condition X, which can take on values A, B, or C;
E and E represent condensing unit power input at maximum and minimum

capacity, respectively for test condition X.

4.7.3.5 Calculate average power input during the low load period as follows. Calculate the temperature, t_{LL} , below which the low load period box load, $BLL(t_j)$, plus defrost heat contribution, \dot{Q}_{DF} (only applicable for freezers), is less than the

minimum net capacity, $\dot{q}(t_j)$, by solving the following equation for t_{LL} :

$$BLL(t_{LL}) + \dot{Q}_{DF} = \dot{q}(t_{LL})$$

For $t_j < t_{LL}$:

$$LFL^{k=1}(t_j) = \frac{BLL(t_j) + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1}(t_j) + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\begin{aligned}\dot{E}_L(t_j) &= (\dot{E}_{ss}^{k=1}(t_j) + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1}(t_j) + (\dot{E}F_{comp,off} + \\ &\quad \dot{E}_{cu,off}(t_j)) * (1 - LFL^{k=1}(t_j))\end{aligned}$$

Where $\dot{E}_{cu,off}(t_j)$, in W, is the condensing unit off-mode power consumption for

temperature t_j , determined as indicated in section 4.7.3.3 of this appendix.

For $t_j \geq t_{LL}$:

$$LFL^{k=1}(t_j) = \frac{\dot{q}_{ss}^{k=2}(t_j) - (BLL(t_j) + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

$$LFL^{k=2}(t_j) = 1 - LFL^{k=1}(t_j)$$

$$\dot{E}_L(t_j) = (\dot{E}_{ss}^{k=1}(t_j) + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1}(t_j) + (\dot{E}_{ss}^{k=2}(t_j) + \dot{E}F_{comp,on}) * LFL^{k=2}(t_j)$$

4.7.3.6 Calculate average power input during the high load period as follows.

Calculate the temperature, t_{HH} , below which the high load period box load, $BLH(t_j)$,

plus defrost heat contribution, \dot{Q}_{DF} (only applicable for freezers), is less than the

minimum net capacity, $\dot{q}(t_j)$, by solving the following equation for t_{HH} :
 $\dot{B}LH(t_{HH}) + \dot{Q}_{DF} = \dot{q}(t_{HH})$

Calculate the temperature, t_{HH} , below which the high load period box load $\dot{B}LH(t_j)$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the

maximum net capacity $\dot{q}(t_j)$, by solving the following equation for t_{HH} :
 $\dot{B}LH(t_{HH}) + \dot{Q}_{DF} = \dot{q}(t_{HH})$
 For $t_j < t_{HH}$:

$$LFH^{k=1}(t_j) = \frac{\dot{B}LH(t_j) + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1}(t_j) + 3.412 \cdot \dot{E}F_{comp,off}}$$

For $t_{HH} \leq t_j < t_{HH}$:

$$LFH^{k=1}(t_j) = \frac{\dot{q}_{ss}^{k=2}(t_j) - (\dot{B}LH(t_j) + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

$$LFH^{k=2}(t_j) = 1 - LFH^{k=1}(t_j)$$

$$\dot{E}_H(t_j) = (\dot{E}_{ss}^{k=1}(t_j) + 0.2 \cdot \dot{E}F_{comp,on}) * LFH^{k=1}(t_j) + (\dot{E}_{ss}^{k=2}(t_j) + \dot{E}F_{comp,on}) * LFH^{k=2}(t_j)$$

For $t_{HH} \leq t_j$:
 $\dot{E}_H(t_j) + (\dot{E}(t_j) + \dot{E}F_{comp,on})$

4.7.3.7 Calculate the AWEF as follows:

$$AWEF = \frac{\sum_{j=1}^n [0.33 \cdot \dot{B}LH(t_j) + 0.67 \cdot \dot{B}LL(t_j)] \cdot n_j}{\sum_{j=1}^n [0.33 \cdot \dot{E}_H(t_j) + 0.67 \cdot \dot{E}_L(t_j) + \dot{D}F] \cdot n_j}$$

4.7.4 Variable-Capacity or Multistage Condensing Units Tested Alone, Outdoor.

4.7.4.1 Unit Cooler Power.

Calculate maximum-capacity unit cooler power during the compressor on period $\dot{E}F_{comp,on}$ as described in section 4.7.1.1 of this appendix.

Calculate unit cooler power during the compressor off period $\dot{E}F_{comp,off}$, in Watts, as 20 percent of the maximum-capacity unit

cooler power during the compressor on period.

4.7.4.2 Defrost.

Calculate Defrost parameters as described in section 4.7.1.2.

4.7.4.3 Condensing Unit Off-Cycle Power.

Calculate Condensing Unit Off-Cycle Power for temperature, t_j , as described in section 4.7.3.3 of this appendix.

4.7.4.4 Net Capacity and Condensing Unit Power Input.

Calculate steady-state maximum net capacity, $\dot{q}(t_j)$, intermediate net capacity, $\dot{q}(t_j)$, and minimum net capacity, $\dot{q}(t_j)$, and corresponding condensing unit power input levels $\dot{E}(t_j)$, $\dot{E}(t_j)$, and $\dot{E}(t_j)$ as a function of outdoor temperature, t_j , as follows:

If $35^\circ\text{F} > t_j \geq 59^\circ\text{F}$:

$$\begin{aligned}\dot{q}_{ss}^{k=2}(t_j) &= \dot{Q}_{gross,C}^{k=2} + (\dot{Q}_{gross,B}^{k=2} - \dot{Q}_{gross,C}^{k=2}) \frac{t_j - 35}{59 - 35} - 3.412 \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=i}(t_j) &= \dot{Q}_{gross,C}^{k=i} + (\dot{Q}_{gross,B}^{k=i} - \dot{Q}_{gross,C}^{k=i}) \frac{t_j - 35}{59 - 35} - 3.412 \cdot K_f \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=1}(t_j) &= \dot{Q}_{gross,C}^{k=1} + (\dot{Q}_{gross,B}^{k=1} - \dot{Q}_{gross,C}^{k=1}) \frac{t_j - 35}{59 - 35} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on} \\ \dot{E}_{ss}^k(t_j) &= \dot{E}_{ss,C}^k + (\dot{E}_{ss,B}^k - \dot{E}_{ss,C}^k) \frac{t_j - 35}{59 - 35}\end{aligned}$$

If $59^\circ\text{F} \geq t_j > 95^\circ\text{F}$:

$$\begin{aligned}\dot{q}_{ss}^{k=2}(t_j) &= \dot{Q}_{gross,B}^{k=2} + (\dot{Q}_{gross,A}^{k=2} - \dot{Q}_{gross,B}^{k=2}) \frac{t_j - 59}{95 - 59} - 3.412 \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=i}(t_j) &= \dot{Q}_{gross,B}^{k=i} + (\dot{Q}_{gross,A}^{k=i} - \dot{Q}_{gross,B}^{k=i}) \frac{t_j - 59}{95 - 59} - 3.412 \cdot K_f \cdot \dot{E}F_{comp,on} \\ \dot{q}_{ss}^{k=1}(t_j) &= \dot{Q}_{gross,B}^{k=1} + (\dot{Q}_{gross,A}^{k=1} - \dot{Q}_{gross,B}^{k=1}) \frac{t_j - 59}{95 - 59} - 3.412 \cdot 0.2 \cdot \dot{E}F_{comp,on} \\ \dot{E}_{ss}^k(t_j) &= \dot{E}_{ss,B}^k + (\dot{E}_{ss,A}^k - \dot{E}_{ss,B}^k) \frac{t_j - 59}{95 - 59}\end{aligned}$$

Where:

The capacity level k can equal 1, i , or 2;
 \dot{Q} , \dot{Q} and \dot{Q} represent gross
 refrigeration capacity at maximum,
 intermediate, and minimum capacity,
 respectively, for test condition X, which
 can take on values A, B, or C;

\dot{E} and \dot{E} represent condensing unit
 power input at maximum and minimum
 capacity, respectively for test condition
 X; and

K_f is the unit cooler power coefficient for
 intermediate capacity operation, set

equal to 0.2 to represent low-speed fan
 operation if the Duty Cycle for a Digital
 Compressor, the Speed Ratio for a
 Variable-Speed Compressor, or the
 Displacement Ratio for a Multi-Stage
 Compressor at Intermediate Capacity is
 65% or less, and otherwise set equal to
 1.0.

4.7.4.5 Calculate average power input
 during the low load period as follows.
 Calculate the temperature, t_{LL} , below which
 the low load period box load $BLL(t_j)$ plus
 defrost heat contribution, \dot{Q}_{DF} (only

applicable for freezers), is less than the
 minimum net capacity, $\dot{q}(t_j)$, by solving the
 following equation for t_{LL} :

$$BLL(t_{LL}) + \dot{q}(t_{LL})$$

Calculate the temperature, t_{VL} , below
 which the low load period box load, $BLL(t_j)$,
 plus defrost heat contribution, \dot{Q}_{DF} (only
 applicable for freezers), is less than the
 intermediate net capacity, $\dot{q}(t_j)$, by solving
 the following equation for t_{VL} :

$$BLL(t_{VL}) + \dot{Q}_{DF} = \dot{q}(t_{VL})$$

For $t_j < t_{LL}$:

$$LFL^{k=1}(t_j) = \frac{BLL(t_j) + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1}(t_j) + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\begin{aligned}\dot{E}_L(t_j) &= (\dot{E}_{ss}^{k=1}(t_j) + 0.2 \cdot \dot{E}F_{comp,on}) * LFL^{k=1}(t_j) + (\dot{E}F_{comp,off} + \\ &\dot{E}_{cu,off}(t_j)) * (1 - LFL^{k=1}(t_j))\end{aligned}$$

Where $\dot{E}_{cu,off}(t_j)$, in W, is the condensing
 unit off-mode power consumption for

temperature, t_j , determined as indicated in
 section 4.7.3.3 of this appendix.

For $t_{LL} \leq t_j < t_{VL}$:

$$EER_L(t_j) = EER^{k=1}(t_j) + (EER^{k=i}(t_j) - EER^{k=1}(t_j)) \frac{(BLL(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}(t_j)}{\dot{q}_{ss}^{k=i}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

$$\dot{E}_L(t_j) = \frac{BLL(t_j)}{EER_L(t_j)}$$

For $t_{VL} \leq t_j$:

$$EER_L(t_j) = EER^{k=i}(t_j) + (EER^{k=2}(t_j) - EER^{k=i}(t_j)) \frac{(BLL(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}(t_j)}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=i}(t_j)}$$

$$\dot{E}_L(t_j) = \frac{BLL(t_j)}{EER_L(t_j)}$$

Where:

$EER^{k=1}(t_j)$ is the minimum-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}(t_j) + 0.2 \cdot \dot{E}F_{comp,on}$;
 $EER^{k=i}(t_j)$ is the intermediate-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}_{ss}^{k=i}(t_j) + K_f \cdot \dot{E}F_{comp,on}$; and
 $EER^{k=2}(t_j)$ is the maximum-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}(t_j) + \dot{E}F_{comp,on}$

4.7.4.6 Calculate average power input during the high load period as follows.

Calculate the temperature t_{vH} below which the high load period box load $B\dot{L}H(t_j)$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the intermediate net capacity $\dot{q}(t_j)$, by solving the following equation for t_{vH} :
 $B\dot{L}H(t_{vH}) + \dot{Q}_{DF} = \dot{q}_{ss}^{k=i}(t_{vH})$

Calculate the temperature t_{IH} below which the high load period box load $B\dot{L}H(t_j)$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the maximum net capacity $\dot{q}(t_j)$, by solving the following equation for t_{IH} :
 $B\dot{L}H(t_{IH}) + \dot{Q}_{DF} = \dot{q}(t_{IH})$

For $t_j < t_{vH}$:

$$EER_H(t_j) = EER^{k=1}(t_j) + \left(EER^{k=i}(t_j) - EER^{k=1}(t_j) \right) \frac{(B\dot{L}H(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}(t_j)}{\dot{q}_{ss}^{k=i}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

$$\dot{E}_H(t_j) = \frac{B\dot{L}H(t_j)}{EER_H(t_j)}$$

For $t_{vH} \leq t_j < t_{IH}$:

$$EER_H(t_j) = EER^{k=i}(t_j) + \left(EER^{k=2}(t_j) - EER^{k=i}(t_j) \right) \frac{(B\dot{L}H(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}(t_j)}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=i}(t_j)}$$

$$\dot{E}_H(t_j) = \frac{B\dot{L}H(t_j)}{EER_H(t_j)}$$

For $t_{IH} \leq t_j$:

$$\dot{E}_H(t_j) = (\dot{E}(t_j) + \dot{E}F_{comp,on})$$

4.7.4.7 Calculate the AWEF as follows:

$$AWEF = \frac{\sum_{j=1}^n [0.33 \cdot B\dot{L}H(t_j) + 0.67 \cdot B\dot{L}L(t_j)] \cdot n_j}{\sum_{j=1}^n [0.33 \cdot \dot{E}_H(t_j) + 0.67 \cdot \dot{E}_L(t_j) + \dot{D}F] \cdot n_j}$$

4.7.5 Two-Capacity Indoor Matched Pairs or Single-Packaged Refrigeration Systems Other than High-Temperature.

4.7.5.1 Defrost.

For freezer refrigeration systems, defrost heat contribution \dot{Q}_{DF} in Btu/h and the

defrost average power consumption $\dot{D}F$ in W shall be as measured in accordance with Section C10.2.1 of Appendix C of AHRI 1250–2020.

4.7.5.2 Calculate average power input during the low load period as follows.

If the low load period box load $B\dot{L}L$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the minimum net capacity \dot{q} :

$$LFL^{k=1} = \frac{B\dot{L}L + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1} + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1}) * LFL^{k=1} + (\dot{E}F_{comp,off} + \dot{E}_{cu,off}) * (1 - LFL^{k=1})$$

Where:

\dot{q} and \dot{E} are the steady state refrigeration system minimum net capacity, in Btu/h, and associated refrigeration system power input, in W, respectively, for

minimum-capacity operation, measured as described in AHRI 1250–2020.
 $\dot{E}F_{comp,off}$ and $\dot{E}_{cu,off}$, both in W, are the unit cooler and condensing unit, respectively, off-mode power consumption, measured

as described in Section C3.5 of AHRI 1250–2020.

If the low load period box load $B\dot{L}L$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is greater than the minimum net capacity \dot{q} :

$$LFL^{k=1} = \frac{\dot{q}_{ss}^{k=2} - (\dot{B}LL + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=1}}$$

$$LFL^{k=2} = 1 - LFL^{k=1}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1}) * LFL^{k=1} + (\dot{E}_{ss}^{k=2}) * LFL^{k=2}$$

Where \dot{q} and \dot{E} are the steady state refrigeration system maximum net capacity, in Btu/h, and associated refrigeration system

power input, in W, respectively, for maximum-capacity operation, measured as described in AHRI 1250–2020.

4.7.5.3 Calculate average power input during the high load period as follows.

$$LFH^{k=1} = \frac{\dot{q}_{ss}^{k=2} - (\dot{B}LH + \dot{Q}_{DF})}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=1}}$$

$$LFH^{k=2} = 1 - LFH^{k=1}$$

$$\dot{E}_H = (\dot{E}_{ss}^{k=1}) * LFH^{k=1} + (\dot{E}_{ss}^{k=2}) * LFH^{k=2}$$

4.7.5.4 Calculate the AWEF as follows:

$$AWEF = \frac{0.33 \cdot \dot{B}LH + 0.67 \cdot \dot{B}LL}{0.33 \cdot \dot{E}_H + 0.67 \cdot \dot{E}_L + \dot{D}F}$$

4.7.6 Variable-Capacity or Multistage Indoor Matched Pairs or Single-Packaged Refrigeration Systems Other than High-Temperature.

4.7.6.1 Defrost.

For freezer refrigeration systems, defrost heat contribution in Btu/h and the defrost average power consumption in W shall be as measured in accordance with Section C10.2.1 of Appendix C of AHRI 1250–2020.

4.7.6.2 Calculate average power input during the low load period as follows.

If the low load period box load $\dot{B}LL$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is less than the minimum net capacity \dot{q}

$$LFL^{k=1} = \frac{\dot{B}LL + 3.412 \cdot \dot{E}F_{comp,off} + \dot{Q}_{DF}}{\dot{q}_{ss}^{k=1} + 3.412 \cdot \dot{E}F_{comp,off}}$$

$$\dot{E}_L = (\dot{E}_{ss}^{k=1}) * LFL^{k=1} + (\dot{E}F_{comp,off} + \dot{E}_{cu,off}) * (1 - LFL^{k=1})$$

Where:

\dot{q} and \dot{E} are the steady state refrigeration system minimum net capacity, in Btu/h, and associated refrigeration system power input, in W, respectively, for

minimum-capacity operation, measured as described in AHRI 1250–2020; and $\dot{E}F_{comp,off}$ and $\dot{E}_{cu,off}$, both in W, are the unit cooler and condensing unit, respectively, off-mode power consumption, measured as described in Section C3.5 of AHRI 1250–2020.

If the low load period box load $\dot{B}LL$ plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is greater than the minimum net capacity \dot{q} and less than the intermediate net capacity \dot{q} :

$$EER_L = EER^{k=1} + (EER^{k=i} - EER^{k=1}) \frac{(\dot{B}LL + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}}{\dot{q}_{ss}^{k=i} - \dot{q}_{ss}^{k=1}}$$

$$\dot{E}_L = \frac{\dot{B}LL}{EER_L}$$

Where:

$EER^{k=1}$ is the minimum-capacity energy efficiency ratio, equal to \dot{q} divided by \dot{E} ;
 \dot{q} and \dot{E} are the steady state refrigeration system intermediate net capacity, in Btu/h, and associated refrigeration system

power input, in W, respectively, for intermediate-capacity operation, measured as described in AHRI 1250–2020.
 $EER^{k=i}$ is the intermediate-capacity energy efficiency ratio, equal to \dot{q} divided by \dot{E} .

4.7.6.3 Calculate average power input during the high load period as follows.
 If the high load period box load BLH plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is greater than the minimum net capacity \dot{q} and less than the intermediate net capacity \dot{q} :

$$EER_H = EER^{k=1} + (EER^{k=i} - EER^{k=1}) \frac{(BLH + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}}{\dot{q}_{ss}^{k=i} - \dot{q}_{ss}^{k=1}}$$

$$\dot{E}_H = \frac{BLH}{EER_H}$$

If the high load period box load BLH plus defrost heat contribution \dot{Q}_{DF} (only applicable for freezers) is greater than the

intermediate net capacity \dot{q} and less than the maximum net capacity \dot{q} :

$$EER_H = EER^{k=i} + (EER^{k=2} - EER^{k=i}) \frac{(BLH + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}}{\dot{q}_{ss}^{k=2} - \dot{q}_{ss}^{k=i}}$$

$$\dot{E}_H = \frac{BLH}{EER_H}$$

Where:

\dot{q} and \dot{E} are the steady state refrigeration system maximum net capacity, in Btu/h, and associated refrigeration system

power input, in W, respectively, for maximum-capacity operation, measured as described in AHRI 1250–2020; and

$EER^{k=2}$ is the maximum-capacity energy efficiency ratio, equal to \dot{q} divided by \dot{E} .

4.7.6.4 Calculate the AWEF as follows.

$$AWEF = \frac{0.33 \cdot BLH + 0.67 \cdot BLL}{0.33 \cdot \dot{E}_H + 0.67 \cdot \dot{E}_L + DF}$$

4.7.7 Variable-Capacity or Multistage Outdoor Matched Pairs or Single-Packaged Refrigeration Systems Other than High-Temperature.

Calculate AWEF as described in Section 7.6 of AHRI 1250–2020, with the following revisions.

4.7.7.1 Condensing Unit Off-Cycle Power.
 Calculate condensing unit off-cycle power for temperature t_j as indicated in section

4.7.3.3 of this appendix. Replace the constant value $\dot{E}_{CU,off}$ in Equations 55 and 70 of AHRI 1250–2020 with the values $\dot{E}_{CU,off}(t_j)$, which vary with outdoor temperature t_j .

4.7.7.2 Unit Cooler Off-Cycle Power.
 Set unit cooler Off-Cycle power $\dot{E}_{F,comp,off}$ equal to the average of the unit cooler off-cycle power measurements made for test conditions A, B, and C.

4.7.7.3 Average Power During the Low Load Period.

Calculate average power for intermediate-capacity compressor operation during the low load period $\dot{E}_{ss,L}^{k=v}(t_j)$ as described in Section 7.6 of AHRI 1250–2020, except that, instead of calculating intermediate-capacity compressor EER using Equation 77, calculate EER as follows.

For $t_j < t_{VL}$:

$$\dot{E}_{ss,L}^{k=v}(t_j) = EER^{k=1}(t_j) + (EER^{k=i}(t_j) - EER^{k=1}(t_j)) \frac{(\dot{B}LL(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}(t_j)}{\dot{q}_{ss}^{k=i}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

For $t_{VL} \leq t_j$:

$$\dot{E}_{ss,L}^{k=v}(t_j) = EER^{k=i}(t_j) + (EER^{k=2}(t_j) - EER^{k=i}(t_j)) \frac{(\dot{B}LL(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}(t_j)}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=i}(t_j)}$$

Where:

$EER^{k=1}(t_j)$ is the minimum-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}^{k=1}(t_j)$;

$EER^{k=i}(t_j)$ is the intermediate-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}(t_j)$; and

$EER^{k=2}(t_j)$ is the maximum-capacity energy efficiency ratio, equal to $\dot{q}(t_j)$ divided by $\dot{E}(t_j)$

4.7.7.4 Average Power During the High Load Period.

Calculate average power for intermediate-capacity compressor operation during the

high load period $\dot{E}(t_j)$ as described in Section 7.6 of AHRI 1250–2020, except that, instead of calculating intermediate-capacity compressor EER using Equation 61, calculate EER as follows:

For $t_j < t_{vh}$:

$$EER_{ss,H}^{k=v}(t_j) = EER^{k=1}(t_j) + \left(EER^{k=i}(t_j) - EER^{k=1}(t_j) \right) \frac{(BLH(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=1}(t_j)}{\dot{q}_{ss}^{k=i}(t_j) - \dot{q}_{ss}^{k=1}(t_j)}$$

For $t_{vh} \leq t_j$:

$$EER_{ss,H}^{k=v}(t_j) = EER^{k=i}(t_j) + \left(EER^{k=2}(t_j) - EER^{k=i}(t_j) \right) \frac{(BLH(t_j) + \dot{Q}_{DF}) - \dot{q}_{ss}^{k=i}(t_j)}{\dot{q}_{ss}^{k=2}(t_j) - \dot{q}_{ss}^{k=i}(t_j)}$$

4.7.8 Two-Capacity Outdoor Matched Pairs or Single-Packaged Refrigeration Systems Other than High-Temperature.

Calculate AWEF as described in Section 7.5 of AHRI 1250–2020, with the following revisions for Condensing Unit Off-Cycle Power and Unit Cooler Off-Cycle Power. Calculate condensing unit off-cycle power for temperature t_j as indicated in section 4.7.3.3 of this appendix. Replace the constant value $\dot{E}_{CU,off}$ in Equations 13 and 29 of AHRI 1250–2020 with the values $\dot{E}_{CU,off}(t_j)$, which vary with outdoor temperature t_j . Set unit cooler Off-Cycle power $\dot{E}_{comp,off}$ equal to the average of the unit cooler off-cycle power measurements made for test conditions A, B, and C.

4.7.9 Single-capacity Outdoor Matched Pairs or Single-Packaged Refrigeration Systems Other than High-Temperature.

Calculate AWEF as described in Section 7.4 of AHRI 1250–2020, with the following

revision for Condensing Unit Off-Cycle Power and Unit Cooler Off-cycle Power.

Calculate condensing unit off-cycle power for temperature t_j as indicated in section 4.7.3.3 of this appendix. Replace the constant value $\dot{E}_{CU,off}$ in Equations 13 of AHRI 1250–2020 with the values $\dot{E}_{CU,off}(t_j)$, which vary with outdoor temperature t_j . Set unit cooler Off-Cycle power $\dot{E}_{comp,off}$ equal to the average of the unit cooler off-cycle power measurements made for test conditions A, B, and C.

4.7.10 Single-capacity Condensing Units, Outdoor.

Calculate AWEF as described in Section 7.9 of AHRI 1250–2020, with the following revision for Condensing Unit Off-Cycle Power. Calculate condensing unit off-cycle power for temperature t_j as indicated in section 4.7.3.3 of this appendix rather than as indicated in equations 157, 159, 202, and 204 of AHRI 1250–2020.

4.7.11 High-Temperature Matched Pairs or Single-Packaged Refrigeration Systems, Indoor.

4.7.11.1 Calculate Load Factor LF as follows:

$$LF = \frac{\dot{B}L + 3.412 \cdot \dot{E}F_{comp,off}}{\dot{q}_{ss,A} + 3.412 \cdot \dot{E}F_{comp,off}}$$

Where:

$\dot{B}L$, in Btu/h is the non-equipment-related box load calculated as described in section 4.6.3 of this appendix;

$\dot{E}F_{comp,off}$, in W, is the unit cooler off-cycle power consumption, equal to 0.1 times the unit cooler on-cycle power consumption; and

$\dot{q}_{ss,A}$, in Btu/h is the measured net capacity for test condition A.

4.7.11.2 Calculate the AWEF as follows:

$$AWEF = \frac{\dot{B}L}{\dot{E}_{ss,A} \cdot LF + (\dot{E}F_{comp,off} + \dot{E}_{cu,off}) \cdot (1 - LF)}$$

Where:

$\dot{E}_{ss,A}$, in W, is the measured system power input for test condition A; and

$\dot{E}_{cu,off}$, in W, is the condensing unit off-cycle power consumption, measured as described in Section C3.5 of AHRI 1250–2020.

4.7.12 High-Temperature Matched Pairs or Single-Packaged Refrigeration Systems, Outdoor.

4.7.12.1 Calculate Load Factor $LF(t_j)$ for outdoor temperature t_j as follows:

$$LF(t_j) = \frac{\dot{B}L + 3.412 \cdot \dot{E}F_{comp,off}}{\dot{q}_{ss}(t_j) + 3.412 \cdot \dot{E}F_{comp,off}}$$

Where:

$\dot{B}L$, in Btu/h, is the non-equipment-related box load calculated as described in section 4.6.3 of this appendix;

$\dot{E}F_{comp,off}$, in W, is the unit cooler off-cycle power consumption, equal to 0.1 times the unit cooler on-cycle power consumption; and

$\dot{q}_{ss}(t_j)$, in Btu/h, is the net capacity for outdoor temperature t_j , calculated as described in Section 7.4.2 of AHRI 1250–2020.

4.7.12.2 Calculate the AWEF as follows:

AWEF

$$= \frac{\sum_{i=1}^n \dot{B}L \cdot n_j}{\sum_{j=1}^n \left[\dot{E}_{ss}(t_j) \cdot LF(t_j) + (\dot{E}F_{comp,off} + \dot{E}F_{cu,off}) \cdot (1 - LF(t_j)) \right] \cdot n_j}$$

Where:

$\dot{E}_{ss}(t_j)$, in W, is the system power input for temperature t_j , calculated as described in Section 7.4.2 of AHRI 1250–2020;

$\dot{E}_{cu,off}$ in W, is the condensing unit off-cycle power consumption, measured as described in Section C3.5 of AHRI 1250–2020; and
 n_j are the hours for temperature bin j .

4.7.13 High-Temperature Unit Coolers Tested Alone.

4.7.13.1 Calculate Refrigeration System Power Input as follows:

$$\dot{E}_{mix,rack} = \frac{\dot{q}_{mix,evap} + 3.412 \times \dot{E}F_{comp,on}}{EER} + \dot{E}F_{comp,on}$$

Where:

$\dot{q}_{mix,evap}$, in W, is the net evaporator capacity, measured as described in AHRI 1250–2020;

$\dot{E}F_{comp,on}$, in W, is the unit cooler on-cycle power consumption; and EER, in W, equals

$$\begin{cases} 11 & \text{if } \dot{q}_{mix,evap} < 10,000 \text{ Btu/h} \\ 0.0007 \cdot \dot{q}_{mix,evap} + 4 & \text{if } 10,000 \leq \dot{q}_{mix,evap} \leq 20,000 \text{ Btu/h} \\ 18 & \text{if } 20,000 \leq \dot{q}_{mix,evap} \end{cases}$$

4.7.13.2 Calculate the load factor LF as follows:

$$LF = \frac{\dot{B}L + 3.412 \cdot \dot{E}F_{comp,off}}{\dot{q}_{mix,evap} + 3.412 \cdot \dot{E}F_{comp,off}}$$

Where:

$\dot{B}L$, in Btu/h, is the non-equipment-related box load calculated as described in section 4.6.3 of this appendix; and

$\dot{E}F_{comp,off}$, in W, is the unit cooler off-cycle power consumption, equal to 0.1 times the unit cooler on-cycle power consumption.

4.7.13.3 Calculate AWEF as follows:

$$AWEF = \frac{\dot{B}L}{\dot{E}_{mix,rack} \cdot LF + \dot{E}F_{comp,off} \cdot (1 - LF)}$$

4.7.14 CO₂ Unit Coolers Tested Alone.

Calculate AWEF for CO₂ Unit Coolers Tested Alone using the calculations specified in in Section 7.8 of AHRI 1250–2020 for calculation of AWEF for Unit Cooler Tested Alone.

4.8. Test Method.

Test the Refrigeration System in accordance with AHRI 1250–2020 to determine refrigeration capacity and power input for the specified test conditions, with revisions and additions as described in this section.

4.8.1 Chamber Conditioning Using the Unit Under Test.

In Appendix C, Section C5.2.2 of AHRI 1250–2020, for applicable system configurations (matched pairs, single-packaged refrigeration systems, and standalone unit coolers), the unit under test may be used to aid in achieving the required

test chamber conditions prior to beginning any steady state test. However, the unit under test must be inspected and confirmed to be free from frost before initiating steady state testing.

4.8.2 General Modification: Methods of Testing.

4.8.2.1 Refrigerant Temperature Measurements.

When testing a condensing unit alone, measure refrigerant liquid temperature leaving the condensing unit as required in Section C7.5.1.1.2 of Appendix C of AHRI 1250–2020 using the same measurement approach specified for the unit cooler in Section C3.1.3 of Appendix C of AHRI 1250–2020. In all cases in which thermometer wells or immersed sheathed sensors are prescribed, if the refrigerant tube outer diameter is less than 1/2 inch, the refrigerant temperature may be measured using the

average of two temperature measuring instruments with a minimum accuracy of ±0.5 °F placed on opposite sides of the refrigerant tube surface—resulting in a total of up to 8 temperature measurement devices used for the DX Dual Instrumentation method. In this case, the refrigerant tube shall be insulated with 1-inch thick insulation from a point 6 inches upstream of the measurement location to a point 6 inches downstream of the measurement location. Also, to comply with this requirement, the unit cooler/evaporator entering measurement location may be moved to a location 6 inches upstream of the expansion device and, when testing a condensing unit alone, the entering and leaving measurement locations may be moved to locations 6 inches from the respective service valves.

4.8.2.2 Mass Flow Meter Location.

When using the DX Dual Instrumentation test method of AHRI 1250–2020, applicable for unit coolers, dedicated condensing units, and matched pairs, the second mass flow meter may be installed in the suction line as shown in Figure C1 of AHRI 1250–2020.

4.8.2.3 Subcooling at Refrigerant Mass Flow Meter.

In Section C3.4.5 of Appendix C of AHRI 1250–2020, when verifying sub-cooling at the mass flow meters, only the sight glass and a temperature sensor located on the tube surface under the insulation are required. Subcooling shall be verified to be within the 3 °F requirement downstream of flow meters located in the same chamber as a condensing unit under test and upstream of flow meters located in the same chamber as a unit cooler under test, rather than always downstream as indicated in AHRI 1250–2009, Section C3.4.5. If the subcooling is less than 3 °F when testing a unit cooler, dedicated condensing unit, or matched pair (not a single-packaged system), cool the line between the condensing unit outlet and this location to achieve the required subcooling. When providing such cooling while testing a matched pair, also measure the refrigerant temperature upstream of the location that the line is being cooled, and increase the temperature used to calculate unit cooler

entering enthalpy by the difference between the upstream and downstream temperatures.

4.8.2.4 Installation Instructions.

Manufacturer installation instructions or installation instructions described in this section refer to the instructions that come packaged with or appear on the labels applied to the unit. This does not include online manuals.

Installation Instruction Hierarchy: If a given installation instruction provided on the label(s) applied to the unit conflicts with the installation instructions that are shipped with the unit, the label takes precedence. For testing of matched pairs, the installation instructions for the dedicated condensing unit shall take precedence. Setup shall be in accordance with the field installation instructions (laboratory installation instructions shall not be used). Achieving test conditions shall always take precedence over installation instructions.

4.8.2.5 Refrigerant Charging and Adjustment of Superheat and Subcooling.

All test samples shall be charged, and superheat and/or subcooling shall be set, at Refrigeration A test conditions unless otherwise specified in the installation instructions. If the installation instructions give a specified range for superheat, sub-cooling, or refrigerant pressure, the average of

the range shall be used as the refrigerant charging parameter target and the test condition tolerance shall be ± 50 percent of the range. Perform charging of near-azeotropic and zeotropic refrigerants only with refrigerant in the liquid state. Once the correct refrigerant charge is determined, all tests shall run until completion without further modification.

4.8.2.5.1. When charging or adjusting superheat/subcooling, use all pertinent instructions contained in the installation instructions to achieve charging parameters within the tolerances. However, in the event of conflicting charging information between installation instructions, follow the installation instruction hierarchy listed in section 4.8.2.4. Conflicting information is defined as multiple conditions given for charge adjustment where all conditions specified cannot be met. In the event of conflicting information within the same set of charging instructions (e.g., the installation instructions shipped with the dedicated condensing unit), follow the hierarchy in Table 19 of this appendix for priority. Unless the installation instructions specify a different charging tolerance, the tolerances identified in Table 19 shall be used.

TABLE 19—TEST CONDITION TOLERANCES AND HIERARCHY FOR REFRIGERANT CHARGING AND SETTING OF REFRIGERANT CONDITIONS

Priority	Fixed orifice		Expansion valve	
	Parameter with installation instruction target	Tolerance	Parameter with installation instruction target	Tolerance
1	Super-heat	± 2.0 °F	Sub-cooling	10% of the Target Value; No less than ± 0.5 °F, No more than ± 2.0 °F.
2	High Side Pressure or Saturation Temperature.	± 4.0 psi or ± 1.0 °F	High Side Pressure or Saturation Temperature.	± 4.0 psi or ± 1.0 °F.
3	Low Side Pressure or Saturation Temperature.	± 2.0 psi or ± 0.8 °F	Super-heat	± 2.0 °F.
4	Low Side Temperature	± 2.0 °F	Low Side Pressure or Saturation Temperature.	± 2.0 psi or ± 0.8 °F.
5	High Side Temperature	± 2.0 °F	Approach Temperature	± 1.0 °F.
6	Charge Weight	± 2.0 oz	Charge Weight	0.5% or 1.0 oz, whichever is greater.

4.8.2.5.2. Dedicated Condensing Unit.

If the Dedicated Condensing Unit includes a receiver and the subcooling target leaving the condensing unit provided in installation instructions cannot be met without fully filling the receiver, the subcooling target shall be ignored. Likewise, if the Dedicated Condensing unit does not include a receiver and the subcooling target leaving the condensing unit cannot be met without the unit cycling off on high pressure, the subcooling target can be ignored. Also, if no instructions for charging or for setting subcooling leaving the condensing unit are provided in the installation instructions, the refrigeration system shall be set up with a charge quantity and/or exit subcooling such that the unit operates during testing without shutdown (e.g., on a high-pressure switch) and operation of the unit is otherwise consistent with the requirements of the test

procedure of this appendix and the installation instructions.

4.8.2.5.3. **Unit Cooler.** Use the shipped expansion device for testing. Otherwise, use the expansion device specified in the installation instructions. If the installation instructions specify multiple options for the expansion device, any specified expansion device may be used. The supplied expansion device shall be adjusted until either the superheat target is met, or the device reaches the end of its adjustable range. In the event the device reaches the end of its adjustable range and the super heat target is not met, test with the adjustment at the end of its range providing the closest match to the superheat target, and the test condition tolerance for super heat target shall be ignored. The measured superheat is not subject to a test operating tolerance. However, if the evaporator exit condition is used to determine capacity using the DX

dual-instrumentation method or the refrigerant enthalpy method, individual superheat value measurements may not be equal to or less than zero. If this occurs, or if the operating tolerances of measurements affected by expansion device fluctuation are exceeded, the expansion device shall be replaced, operated at an average superheat value higher than the target, or both, in order to avoid individual superheat value measurements less than zero and/or to meet the required operating tolerances.

4.8.2.5.4. **Single-Packaged Unit.** Unless otherwise directed by the installation instructions, install one or more refrigerant line pressure gauges during the setup of the unit, located depending on the parameters used to verify or set charge, as described in this section:

4.8.2.5.4.1. Install a pressure gauge in the liquid line if charging is on the basis of subcooling, or high side pressure or

corresponding saturation or dew point temperature.

4.8.2.5.4.2. Install a pressure gauge in the suction line if charging is on the basis of superheat, or low side pressure or corresponding saturation or dew point temperature. Install this gauge as close to the evaporator as allowable by the installation instructions and the physical constraints of the unit. Use methods for installing pressure gauge(s) at the required location(s) as indicated in the installation instructions if specified.

4.8.2.5.4.3. If the installation instructions indicate that refrigerant line pressure gauges should not be installed and the unit fails to operate due to high pressure or low pressure compressor cut off, then a charging port shall be installed, and the unit shall be evacuated of refrigerant and charged to the nameplate charge.

4.8.2.6 Ducted Units.

For systems with ducted evaporator air, or that can be installed with or without ducted evaporator air: Connect ductwork on both the inlet and outlet connections and determine external static pressure (ESP) as described in Sections 6.4 and 6.5 of ANSI/ASHRAE 37. Use pressure measurement instrumentation as described in Section 5.3.2 of ANSI/ASHRAE 37. Test at the fan speed specified in the installation instructions—if there is more than one fan speed setting and the installation instructions do not specify which speed to use, test at the highest speed. Conduct tests with the ESP equal to 50% of the maximum ESP allowed in the installation instructions, within a tolerance of $-0.00/+0.05$ inches of water column. If the installation instructions do not provide the maximum ESP, the ESP shall be set for testing such that the air volume rate is $\frac{2}{3}$ of

the air volume rate measured when the ESP is 0.00 inches of water column within a tolerance of $-0.00/+0.05$ inches of water column.

If testing using either the indoor or outdoor air enthalpy method to measure the air volume rate, adjust the airflow measurement apparatus fan to set the external static pressure—otherwise, set the external static pressure by symmetrically restricting the outlet of the test duct. In case of conflict, these requirements for setting airflow take precedence over airflow values specified in manufacturer installation instructions or product literature.

4.8.2.7 Two-Speed or Multiple-Speed Evaporator Fans. Two-Speed or Multiple-Speed evaporator fans shall be considered to meet the qualifying control requirements of Section C4.2 of Appendix C of AHRI 1250–2020 for measuring off-cycle fan energy if they use a fan speed no less than 50% of the speed used in the maximum capacity tests.

4.8.2.8 Defrost.

Use Section C10.2.1 of Appendix C of AHRI 1250–2020 for defrost testing. The Test Room Conditioning Equipment requirement of Section C10.2.1.1 of Appendix C of AHRI 1250–2020 does not apply.

4.8.2.8.1 Adaptive Defrost.

When testing to certify compliance to the energy conservation standards, use $N_{DF} = 4$, as instructed in Section C10.2.1.7 or C10.2.2.1 of AHRI 1250–2020. When determining the represented value of the calculated benefit for the inclusion of adaptive defrost, use $N_{DF} = 2.5$, as instructed in Section C10.2.1.7 or C10.2.2.1 of AHRI 1250–2020.

4.8.2.8.2 Hot Gas Defrost.

When testing to certify compliance to the energy conservation standards, remove the

hot gas defrost mechanical components and disconnect all such components from electrical power. Test the units as if they are electric defrost units, but do not conduct the defrost tests described in Section C10.2.1 of AHRI 1250–2020. Use the defrost heat and power consumption values as described in Section C10.2.2 of AHRI 1250–2020 for the AWEF calculations.

When determining the represented value of the calculated benefit for the inclusion of hot gas defrost, test with hot gas mechanical components installed, but do not conduct the defrost tests. Use the defrost heat and power consumption values as described in Section C10.1.1 of AHRI 1250–2020 for the AWEF calculations.

4.8.2.9 Dedicated condensing units that are not matched for testing and are not single-packaged dedicated systems.

The temperature measurement requirements of sections C3.1.3 and C4.1.3.1 Appendix C of AHRI 1250–2020 shall apply only to the condensing unit exit rather than to the unit cooler inlet and outlet, and they shall be applied for two measurements when using the DX Dual Instrumentation test method.

4.8.2.10 Single-packaged dedicated systems.

Use the test method in section C9 of Appendix C of AHRI 1250–2020 as the method of test for single-packaged dedicated systems, with modifications as described in this section. Use two test methods listed in Table 20 of this appendix to calculate the net capacity and power consumption. The test method listed with a lower “Hierarchy Number” and that has “Primary” as an allowable use in Table 20 shall be considered the primary measurement and used as the net capacity.

TABLE 20—SINGLE-PACKAGED METHODS OF TEST AND HIERARCHY

Hierarchy No.	Method of test	Allowable use
1	Balanced Ambient Indoor Calorimeter	Primary.
2	Indoor Air Enthalpy	Primary or Secondary.
3	Indoor Room Calorimeter	Primary or Secondary.
4	Balanced Ambient Outdoor Calorimeter	Secondary.
5	Outdoor Air Enthalpy	Secondary.
6	Outdoor Room Calorimeter	Secondary.
7	Single-Packaged Refrigerant Enthalpy ¹	Secondary.
8	Compressor Calibration	Secondary.

Notes:

¹ See description of the single-packaged refrigerant enthalpy method in section 4.8.2.10.1 of this appendix.

4.8.2.10.1 Single-Packaged Refrigerant Enthalpy Method.

The single-packaged refrigerant enthalpy method shall follow the test procedure of the DX Calibrated Box method in AHRI 1250–2020, Appendix C, section C8 for refrigerant-side measurements with the following modifications.

4.8.2.10.1.1 Air-side measurements shall follow the requirements of the primary single-packaged method listed in Table 20 of this appendix. The air-side measurements and refrigerant-side measurements shall be collected over the same intervals.

4.8.2.10.1.2 A preliminary test at Test Rating Condition A is required using the

primary method prior to any modification necessary to install the refrigerant-side measuring instruments. Install surface mount temperature sensors on the evaporator and condenser coils at locations not affected by liquid subcooling or vapor superheat (*i.e.*, near the midpoint of the coil at a return bend), entering and leaving the compressor, and entering the expansion device. These temperature sensors shall be included in the regularly recorded data.

4.8.2.10.1.3 After the preliminary test is completed, the refrigerant shall be removed from the equipment and the refrigerant-side measuring instruments shall be installed. The equipment shall then be evacuated and

recharged with refrigerant. Once the equipment is operating at Test Condition A, the refrigerant charge shall be adjusted until, as compared to the average values from the preliminary test, the following conditions are achieved:

(1) Each on-coil temperature sensor indicates a reading that is within ± 1.0 °F of the measurement in the initial test,

(2) The temperatures of the refrigerant entering and leaving the compressor are within ± 4 °F, and

(3) The refrigerant temperature entering the expansion device is within ± 1 °F. Once these conditions have been achieved over an interval of at least ten minutes, refrigerant

charging equipment shall be removed and the official tests shall be conducted.

4.8.2.10.1.4 The lengths of liquid line to be added shall be 5 feet maximum, not including the requisite flow meter. This maximum length applies to each circuit separately.

4.8.2.10.1.5 Use section C9.2 of Appendix C of AHRI 1250–2020 for allowable refrigeration capacity heat balance. Calculate the single-packaged refrigerant enthalpy (secondary) method test net capacity $\dot{Q}_{net,secondary}$ as follows:

$$\dot{Q}_{net,secondary} = \dot{Q}_{ref} - 3.412 \cdot \dot{E}F_{comp,on} - \dot{Q}_{sploss}$$

Where:

\dot{Q}_{ref} is the gross capacity;

$\dot{E}F_{comp,on}$ is the evaporator compartment on-cycle power, including evaporator fan power; and

\dot{Q}_{sploss} is a duct loss calculation applied to the evaporator compartment of the single-packaged systems, which is calculated as indicated below.

$$\dot{Q}_{sploss} = UA_{cond} \times (T_{evapside} - T_{condside}) + UA_{amb} \times (T_{evapside} - T_{amb})$$

Where:

UA_{cond} and UA_{amb} are, for the condenser/evaporator partition and the evaporator compartment walls exposed to ambient air, respectively, the product of the overall heat transfer coefficient and surface area of the unit as manufactured, *i.e.*, without external insulation that might have been added during the test. The areas shall be calculated based on measurements, and the thermal resistance values shall be based on insulation thickness and insulation material;

$T_{evapside}$ is the air temperature in the evaporator compartment—the measured evaporator air inlet temperature may be used;

$T_{condside}$ is the air temperature in the condenser compartment—the measured chamber ambient temperature may be used, or a measurement may be made using a temperature sensor placed inside the condenser box at least 6 inches distant from any part of the refrigeration system; and

T_{amb} is the air temperature outside the single-packaged system.

4.8.2.10.1.6 For multi-circuit single-packaged systems utilizing the single-packaged refrigerant enthalpy method, apply the test method separately for each circuit and sum the separately-calculated refrigerant-side gross refrigeration capacities.

4.8.2.10.2 Detachable single-packaged systems shall be tested as single-packaged dedicated refrigeration systems.

4.8.2.11 Variable-Capacity and Multiple-Capacity Dedicated Condensing Refrigeration Systems.

4.8.2.11.1 Manufacturer-Provided Equipment Overrides.

Where needed, the manufacturer must provide a means for overriding the controls of the test unit so that the compressor(s) operates at the specified speed or capacity and the indoor blower operates at the speed consistent with the compressor operating level as would occur without override.

4.8.2.11.2 Compressor Operating Levels.

For variable-capacity and multiple-capacity compressor systems, the minimum capacity for testing shall be the minimum capacity that the system control would operate the compressor in normal operation. Likewise, the maximum capacity for testing shall be the maximum capacity that the system control would operate the compressor in normal operation. For variable-speed compressor systems, the intermediate speed for testing shall be the average of the minimum and maximum speeds. For digital compressor systems, the intermediate duty

cycle shall be the average of the minimum and maximum duty cycles. For multiple-capacity compressor systems with three capacity levels, the intermediate operating level for testing shall be the middle capacity level. For multiple-capacity compressor systems with more than three capacity levels, the intermediate operating level for testing shall be the level whose displacement ratio is closest to the average of the maximum and minimum displacement ratios.

4.8.2.11.3 Refrigeration Systems with Digital Compressor(s).

Use the test methods described in section 4.8.2.10.1 of this appendix as the secondary method of test for refrigeration systems with digital compressor(s) with modifications as described in this section. The Test Operating tolerance for refrigerant mass flow rate and suction pressure in Table 2 of AHRI 1250–2020 shall be ignored. Temperature and pressure measurements used to calculate \dot{Q}_{ref} shall be recorded at a frequency of once per second or faster and based on average values measured over the 30-minute test period.

4.8.2.11.3.1 For Matched pair (not including single-packaged systems) and Dedicated Condensing Unit refrigeration systems, the preliminary test in sections 4.8.2.10.1.2 and 4.8.2.10.1.3 of this appendix is not required. The liquid line and suction line shall be 25 feet \pm 3 inches, not including the requisite flow meters. Also, the term \dot{Q}_{sploss} in the equation to calculate net capacity shall be set equal to zero.

4.8.2.11.3.2 For Dedicated Condensing Unit refrigeration systems, the primary capacity measurement method shall be balanced ambient outdoor calorimeter, outdoor air enthalpy, or outdoor room calorimeter.

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